

NOV 19 1927

# PROCEEDINGS

of the  
**American Society**  
of  
**Civil Engineers**

TWO PARTS



PART 1

OCTOBER, 1927

## CONTENTS

**NEW THEORY FOR THE CENTRIFUGAL PUMP**

By A. F. SHERZER, Assoc. M. Am. Soc. C. E.

**THE HYDRAULIC DESIGN OF FLUME AND SIPHON TRANSITIONS**

By JULIAN HINDS, M. Am. Soc. C. E.

**WATER-POWER APPRAISALS**

By WILLIAM H. CUSHMAN, M. Am. Soc. C. E.

**THE GREAT YANGTZE BAR**

By H. VON HEIDENSTAM, M. Am. Soc. C. E.

**SIDE SPILLWAYS FOR REGULATING DIVERSION CANALS**

By W. H. R. NIMMO, Assoc. M. Am. Soc. C. E.

**A GRAPHIC METHOD FOR DETERMINING THE STRESSES IN CIRCULAR ARCHES UNDER NORMAL LOADS BY THE CAIN FORMULAS**

By FREDERICK HALL FOWLER, M. Am. Soc. C. E.

**PAPERS PRESENTED AT THE MEETING OF THE SURVEYING AND MAPPING DIVISION, PHILADELPHIA, PA., OCTOBER 6, 1926**

**PAPERS PRESENTED AT THE MEETING OF THE WATERWAYS DIVISION, PHILADELPHIA, PA., OCTOBER 8, 1926**

**PAPERS PRESENTED AT THE MEETING OF THE HIGHWAY DIVISION, NEW YORK, N. Y., JANUARY 20, 1927**

**PAPER PRESENTED AT THE MEETING OF THE SURVEYING AND MAPPING DIVISION, JANUARY 20, 1927**

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**FALL MEETING, COLUMBUS, OHIO**  
**OCTOBER 12-15, 1927**

# CURRENT PAPERS AND DISCUSSIONS

"Construction Methods on the Moffat Tunnel." R. H. KEATS.....	Feb. 1927	Discussion closes
Discussion.....	May, Sept.,	Closed
"Civil Engineering Features of the Hell Gate Station." ERNEST M. VAN NORDEN	Mar.,	"
and GEORGE A. HUGHES.....	Aug.,	Closed
Discussion.....	Mar.,	Closed
"The Civil Engineering Features of the Kearny Power Station." ROMAN VON FABRICE,	Apr.,	"
"Automobile Hazard in Cities and Its Reduction." WILLIAM J. COX.....	Aug., Sept.,	Oct., 1927
Discussion.....	Oct.,	"
"Water Supply for Army Railways in France." PAUL M. LABACH.....	Apr.,	"
Discussion (Author's closure).....	Aug.,	Closed
"Probability of Flood Flows." F. G. SWITZER.....	Apr.,	"
Discussion.....	Aug., Sept.,	Oct., 1927
"The Shandaken Tunnel." R. W. GAUSMANN.....	May,	Nov., 1927
"The Eye-Bar Cable Suspension Bridge at Florianopolis, Brazil." D. B. STEINMAN	May,	"
and WILLIAM G. GROVE.....	Oct.,	Nov., 1927
Discussion.....	Aug., Sept.,	"
"The Relation of Highway Transportation to the Railway." RALPH BUDD.....	May,	"
Discussion.....	Oct.,	Nov., 1927
"Urban and Interurban Buses." BRITTON I. BUDD.....	Aug.,	"
Discussion.....	May,	Nov., 1927
The Logging and Lumbering Industries of the Pacific Northwest: A Symposium.	Aug.,	"
Discussion.....	May,	Nov., 1927
"Some Phases of Irrigation Financing." D. C. HENNY.....	Aug., Sept.,	"
Discussion.....	Oct.,	Nov., 1927
"State Reclamation in Washington." R. K. TIFFANY.....	May,	"
Discussion.....	Aug., Sept.,	Nov., 1927
"Tides and Their Engineering Aspects." G. T. RUDE.....	Aug.,	"
Discussion.....	Oct.,	Jan., 1928
"Notes on Arched Gravity Dams." B. F. JAKOBSEN.....	Aug.,	"
Discussion.....	Oct.,	Dec., 1927
"Preparing the Ground Work for a City: The Regrading of Seattle, Wash-	Aug.,	"
ington." ARTHUR H. DIMOCK.....	Oct.,	Dec., 1927
Discussion.....	Aug.,	"
"Re-Arrangement of a Business District: Changes in Recent Years in Pittsburgh,	Aug.,	"
Pennsylvania." NATHAN SCHEIN.....	Oct.,	Dec., 1927
Discussion.....	Aug.,	"
"The Planning of the Industrial City of Longview, Washington." S. HERBERT	Oct.,	"
HARE.....	Aug.,	Dec., 1927
Discussion.....	Oct.,	"
"Modern Crushed Stone and Gravel Surfacing." J. W. HOOVER.....	Aug.,	"
Discussion.....	Oct.,	Dec., 1927
"Relation of Road Type to Tire Wear." O. L. WALLER and H. E. PHELPS.....	Aug.,	"
"Stream Pollution in the Pacific Northwest." WILLIAM F. ALLISON.....	Aug.,	Dec., 1927
Discussion.....	Oct.,	"
"The Sewage Disposal Problem of Los Angeles, California." WILLIS T. KNOWLTON,	Aug.,	"
"The Work of the Los Angeles County (California) Sanitation Districts." ALBERT K. WARREN	Aug.,	"
Discussion.....	Aug.,	Dec., 1927
"The Lake Washington Ship Canal, Washington." W. J. BARDEN and A. W. SARGENT	Aug.,	"
Discussion.....	Oct.,	Dec., 1927
"The Work of the Port of Seattle, Washington." GEORGE F. COTTERILL.....	Aug.,	"
Discussion.....	Oct.,	Dec., 1927
"Precise Weir Measurements." ERNEST W. SCHODER and the late KENNETH B. TURNER	Sept.,	"
"Basic Information Needed for a Regional Plan." HAROLD M. LEWIS.....	Sept.,	Jan., 1928
"Housing and the Regional Plan." JOHN HILDER.....	Sept.,	Jan., 1928
"Cultural Opportunities in Regional Planning." ANDREW WRIGHT CRAWFORD.....	Sept.,	Jan., 1928
"Forecast: The Regional Community of the Future." THOMAS ADAMS.....	Sept.,	Jan., 1928
"The History and Development of Road Building in the United States." THOMAS H. MACDONALD.....	Sept.,	Jan., 1928
"The Question of Roads in France." P. LE GAVRIAN.....	Sept.,	Jan., 1928
Historic Review of the Development of Sanitary Engineering in the United States	Sept.,	"
During the Past One Hundred and Fifty Years: A Symposium.....	Sept.,	Jan., 1928
Industrial Waste Disposal: A Symposium.....	Sept.,	Jan., 1928
"Earth Work by the Hydraulic Method." ROY E. MILLER.....	Sept.,	"
"Problems in Concrete Dam Construction on the Pacific Coast." ARTHUR S. BENT.....	Sept.,	Jan., 1928

# AMERICAN SOCIETY OF CIVIL ENGINEERS

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## PROCEEDINGS

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VOL. LIII

OCTOBER, 1927

No. 8

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### SOCIETY AFFAIRS

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#### JOINT ENGINEERING SOCIETY ACTIVITIES

##### Condensed Summary Shows

##### Organization of Various Engineering and Allied Bodies

From time to time various organizations have been set up by the National Engineering Societies or for which these Societies have accepted sponsorship. Their activities are generally corollary to the activities of the National Societies, but have been considered an established part of Society work and, being usually of a nature in which several of the Societies are interested, the independent organization has seemed logical. In each case, however, the National Societies continue in close touch through some system of representation.

The details of these connections, however, are not generally clearly or fully understood even to many of those most familiar with Society work. Accordingly, a Committee of the Board of Direction was instituted to draw up, with the help of the Secretary's Office, in tabular and graphic form a rather complete but condensed summary of these various activities.

The report of the Committee was submitted to the Board at its Denver Meeting, and so useful did it appear to the Board members that they voted to have it printed in *Proceedings*, especially that it might serve as a similar aid to the general membership and, further, that it might be retained for general reference in a more permanent form. Accordingly, it is given herewith, taking the place ordinarily occupied by Items of Interest. It is hoped indeed that it will be of real interest to every member.

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#### History and Organization

##### American Engineering Council

*Formed.*—December, 1920, as Federated American Engineering Societies. Name changed to American Engineering Council, March 11, 1924.

*Object.*—"To further the public welfare wherever technical and engineering knowledge and experience are involved, and to consider and act upon matters of common concern to the engineering and allied technical professions."

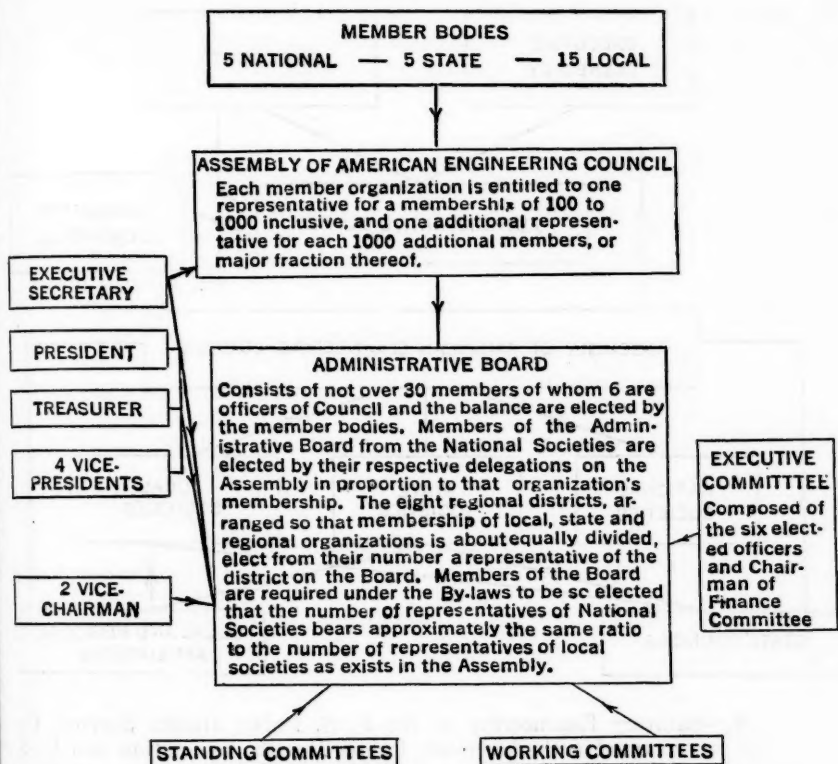
*Membership.*—

5 National Societies..	American Institute of Chemical Engineers .....	722	
	American Institute of Electrical Engineers .....	17 703	
	American Society of Agricultural Engineers .....	524	
	American Society of Mechanical Engineers .....	17 717	
	Society of Industrial Engineers .....	594	37 260
5 State Societies.....	Indiana Engineering Society..	303	
	Iowa Engineering Society....	248	
	Kansas Engineering Society..	200	
	Louisiana Engineering Society	358	
	Vermont Society of Engineers.	159	1 268
15 Local Societies....	Detroit Engineering Society...	572	
	Duluth Engineers Club .....	127	
	Engineers and Architects Club of Louisville .....	180	
	Engineering Society of York..	160	
	Engineers Club of Cincinnati.	526	
	Engineers Club of Columbus..	125	
	Engineers Club of St. Louis..	476	
	Engineers Society of Milwaukee	262	
	Engineers Society of St. Paul.	206	
	Grand Rapids Engineering Society .....	113	
	Little Rock Engineers Club...	45	
	Mohawk Valley Engineers Club	119	
—	Technical Club of Dallas.....	141	
	Topeka Engineers Club.....	105	
	Washington Society of Engineers .....	594	3 751
25			42 279

*Organization.*—

- 1.—President and Executive Secretary of Council are President and Secretary of Executive Committee.
- 2.—All six officers of Council are the officers of the Administrative Board.
- 3.—The Secretary is not a member of the Administrative Board but may be a Representative on Assembly of Council.





#### Management.—

1.—President and Secretary of Council are also President and Secretary of Administrative Board.

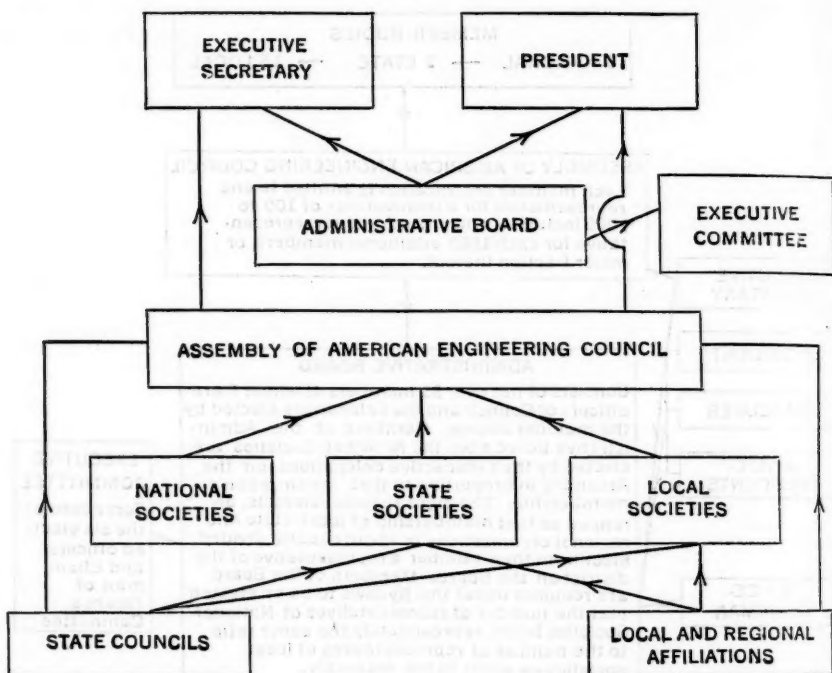
2.—Council co-ordinates the activities of member National Societies, State Councils, and Local and Regional Affiliations on National matters and affairs that are of general interest.

3.—State Councils, consisting of local societies, or local affiliations, are autonomous with respect to matters in their own territory. With National matters in which local groups are active, it is the duty of Council to interest itself in such matters so that the activities will be in the interest of the broad program.

#### Activities.—

##### Governmental Legislation:

- 1.—Reforestation: Worked for restoration of \$2 000 000 appropriation for the purchase of forest preserves under Weeks law; supported passage of Clarke-McNary Bill that defines National Forest policy.
- 2.—Topographic Maps and Surveys: Took lead in support of Temple Act which provides for completion of topographic survey of country in twenty years.
- 3.—National Hydraulic Laboratory: Assisted in drafting measures to establish such laboratory.



- 4.—Sanitary Engineering in the U. S. Public Health Service: Co-operated with American Public Health Association and U. S. Public Health Service in drafting bill to aid status of Engineers in U. S. Public Health Service.
- 5.—Patent Office Improvement: Took part in securing additional offices, appropriations for improved equipment, and increasing personnel of Patent Office.
- 6.—Department of Public Works: Advocated Wyant Bill for re-organizing Government Departments with a new Department of Public Works.
- 7.—Muscle Shoals: Advised Congress not to dispose of Muscle Shoals until after a technical commission had reported.
- 8.—Giant Power: At request of Pennsylvania Legislature, furnished non-resident engineers to advise Legislative Committee.
- 9.—Industrial Alcohol: Was instrumental in having Crampton Bill amended so as not to injure legitimate users of industrial alcohol.
- 10.—Inventory of Water Resources: Is sponsoring measure to provide inventory of water resources of the United States in twenty years.
- 11.—Radio Legislation: Took an active part in securing legislation to eliminate the chaos in radio broadcasting.

#### Participating Projects:

- 1.—Ordnance Officers: Assisted Ordnance Department by suggesting names of capable engineers for enlistment.
- 2.—Street and Highway Safety: Participated in conferences on street and highway safety and co-operated in movement to reduce traffic accidents.

- 3.—Uniform Mechanics Lien Act: Co-operated with Committee of Department of Commerce in drafting proposed uniform Act.
- 4.—National Board for Jurisdictional Awards: Has taken active part in program of settling jurisdictional disputes in construction industry.

#### *Research.—*

##### Studies and Reports on These Subjects:

- 1.—“Waste in Industry”: Has been translated and published in three foreign languages.
- 2.—“Twelve Hour Shift in American Industry.”
- 3.—“Storage of Coal.”
- 4.—“Civil Aviation”: Jointly with Department of Commerce.
- 5.—“Accidents and Production”: In progress.
- 6.—“Street Signs, Signals and Markings”: In progress.

##### Future Research Programs:

- 1.—Waste in agriculture.
- 2.—Waste in industries, which use agricultural products as raw materials.
- 3.—Waste of power.
- 4.—Reclamation of material wastes.
- 5.—Engineering approach to labor supply.
- 6.—Training and employment of partially incapacitated.
- 7.—Industrial fatigue.
- 8.—Integration of industry.

#### *Summary of Activities.—*

##### In co-operation with:

##### 1.—Government Departments..

Treasury.  
War.  
Interior.  
Agriculture.  
Commerce.  
Labor.

##### 2.—Commercial and Trade Organizations.....

American Bar Association.  
American Manufacturers' Association.  
American Patent Law Association.  
American Forestry Association.  
American Institute of Architecture.  
U. S. Chamber of Commerce.  
National Board of Casualty and Surety Underwriters.  
National Research Council.

##### 3.—National, State, and Local Engineering and Technical Groups.

##### 4.—Foreign Groups.....

International Labor Office at Geneva.  
International Scientific Management Congresses.  
National Engineering and Architectural Societies in Czechoslovakia and Poland.

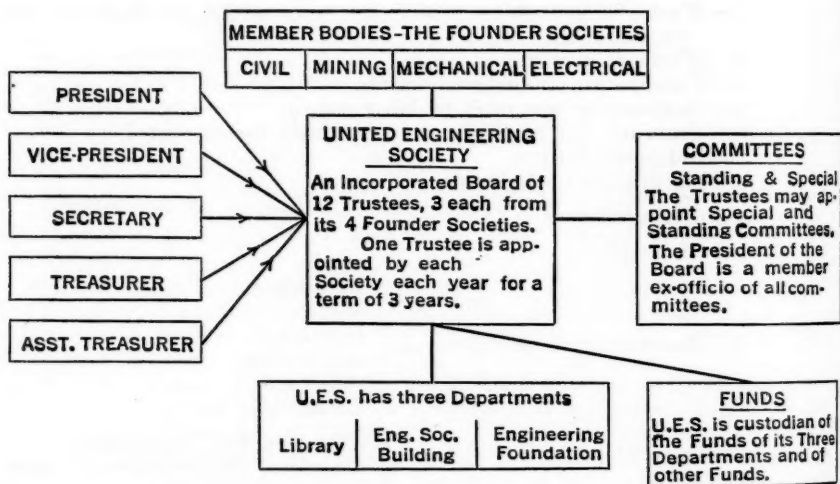
### United Engineering Society

*Organized.*—May 11, 1904, when a bill authorizing such Society was signed by Governor Odell of New York.

*Object.*—To advance the engineering arts and sciences in all their branches, and to maintain a free public engineering library. The Society has power and authority to receive, conserve, invest, and re-invest, hold in trust and administer such moneys or other property as it may receive from any source for its own purposes or for any other endowment or activity within the scope of its charter.

*Membership.*—United Engineering Society is an incorporated Board of Twelve Trustees, three each from its four Founder Societies. One Trustee is appointed each year for a term of three years.

*Organization.*—



1.—The President and Vice-President are elected from the Board of Trustees.

2.—The Secretary, Treasurer, and Assistant Treasurer may, or may not, be members of the Board.

*Activities.*—

- (1) Administers funds it may receive through endowment or solicitation, for any purpose within its charter.
- (2) Administers the funds of Engineering Societies Library and of Engineering Foundation, and acts as sponsor for award of John Fritz Medal.
- (3) Assesses Founder Societies for Library funds and may do so on account of building.
- (4) Administers all financial operations incident to the maintenance and operation of Engineering Societies Building, including accumulation of depreciation fund.



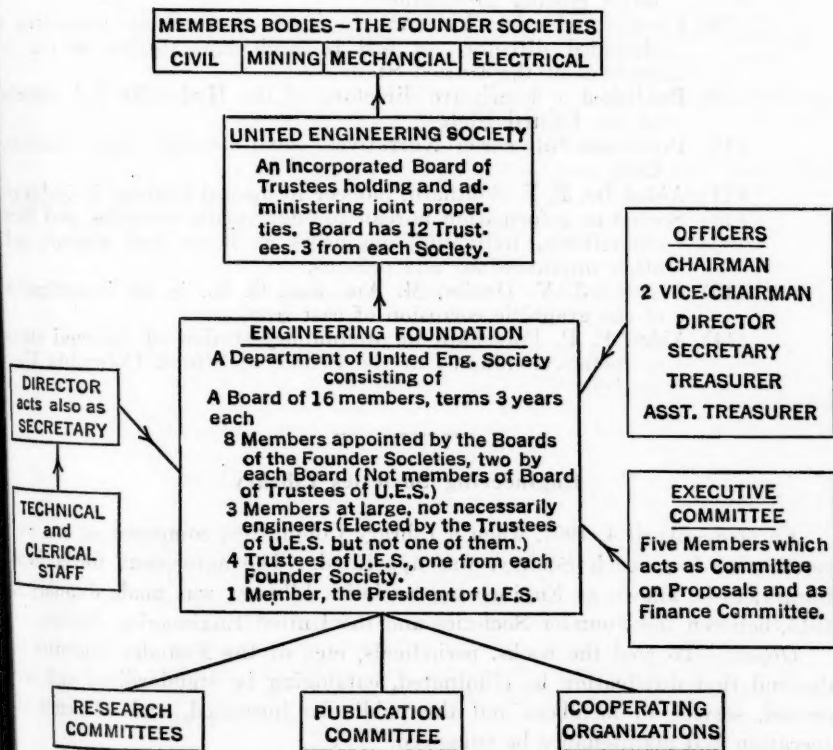
- (5) May co-operate with the Founder Societies in lectures on engineering and scientific subjects and in arranging for the conduct of such educational and research work as may from time to time be deemed advisable.

### Engineering Foundation

**Formed.**—On January 27, 1915, Engineering Foundation was inaugurated in the Auditorium of Engineering Societies Building with speakers representing the four Founder Societies, United Engineering Society, Carnegie Foundation for the Advancement of Teaching. Ambrose Swasey, Past-President, Am. Soc. Mech. Engrs., was announced as the Founder. The organization meeting was held April 15, 1915.

**Object.**—The furtherance of research in science and engineering or the advancement in any other manner of the profession of engineering and the good of mankind.

**Organization.**—



**Activities.**—

- (1) Provided funds which helped make possible National Research Council for service during World War.
- (2) Aided in establishing Division of Engineering, and co-operated with other Divisions of National Research Council.

- (3) Made possible Fatigue of Metals Investigation and co-operated with National Research Council, University of Illinois, and several industrial corporations.
- (4) Made appropriations to Founder Societies for Research Committees on: (a) Concrete and Reinforced Concrete Arches; (b) Steel Columns for Bridges and Buildings; (c) Mining Methods; (d) Properties of Steam; (e) Bearing Metals; (f) Lubrication; and (g) Strength of Gear Teeth.
- (5) Organized and is assisting Committee on Arch Dam Investigation (Stevenson Creek Dam).
- (6) Co-operated with National Research Council in the following: (a) Advisory Board on Highway Research; (b) American Bureau of Welding; (c) Marine Piling Investigations; (d) Personnel Research Federation; (e) Committee on Molding Sands (for foundries); and (f) Pulverizing Committee (ores, cements, fuels).
- (7) Assisted Clemens Herschel, Hon. M. and Past-President, Am. Soc. C. E., in experiments that resulted in an improved form of hollow-crested weir and a simple formula for measuring water flowing in channels.
- (8) Co-operated with National Research Council in compiling a classified directory of 526 research laboratories in the industries of the United States.
- (9) Published a descriptive directory of the Hydraulic Laboratories of the United States.
- (10) Published "Research Narratives" semi-monthly since January, 1921.
- (11) Aided Dr. E. E. Southard, pioneer in mental hygiene in industry.
- (12) Served as information bureau to engineering societies and their committees, individual engineers at home and abroad, and other organizations and persons.
- (13) Assisted J. V. Davies, M. Am. Soc. C. E., in an investigation of the graphitic corrosion of cast iron.
- (14) Aided E. P. Polushkin in preliminary studies of internal stress in metals, conducted at the School of Mines, Columbia University.

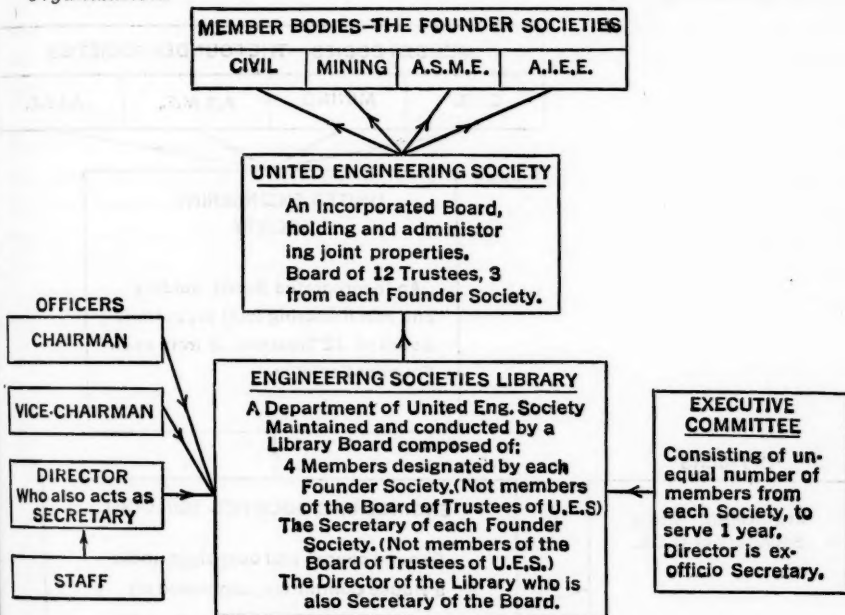
### Engineering Societies Library

*Formed.*—April 4, 1907, when a Library Committee, composed of one representative from each Society, was appointed. The agreement for a joint library, to be known as Engineering Societies Library, was made January 1, 1915, between the Founder Societies and the United Engineering Society.

*Object.*—To pool the books, periodicals, etc., of the Founder Societies to the end that duplication be eliminated, cataloging be standardized and improved, service to members and the public be increased, and efficiency of operation and maintenance be enhanced.

#### *Activities.*—

- (1) Makes searches, translations, photostats.
- (2) Makes loans of books to a limited extent for the particular benefit of distant members.
- (3) Keeps the books and periodicals properly catalogued.

*Organization.—*

1.—One member of the Board is designated by each Founder Society each year to serve for four years.

2.—The Director is appointed by the Library Board.

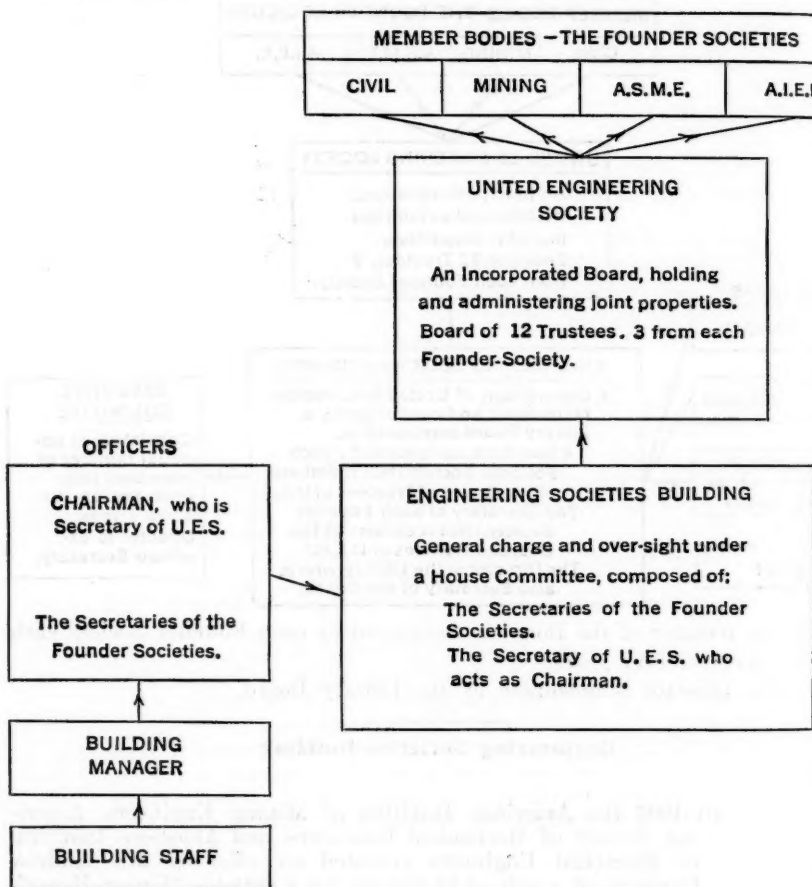
**Engineering Societies Building***History.—*

- (1) In 1903 the American Institute of Mining Engineers, American Society of Mechanical Engineers, and American Institute of Electrical Engineers accepted an offer by Mr. Andrew Carnegie of a gift of \$1 050 000 for a suitable "Union Home".
- (2) May 11, 1904, Governor Odell of New York signed a bill creating United Engineering Society, a body to administer the property and in other ways to advance the engineering arts and sciences.
- (3) December, 1904, Land for the building purchased.
- (4) April 15-20, 1907, The building (thirteen stories) was dedicated.
- (5) August 10, 1916, The American Society of Civil Engineers became the fourth Founder Society on equal terms with the original three Societies by the payment of \$262 500.
- (6) October 27, 1917, The American Society of Civil Engineers moved its Headquarters into the building, three stories having been added.

*Purpose.*—To provide Headquarters facilities, Auditorium, meeting and committee rooms, Library facilities for the Founder Societies as well as housing for organizations in which the Founders are interested.

*Activities.*—United Engineering Society acts as:

- (1) Administrator of the real property.
- (2) Administrator of the accumulated surplus or depreciation fund.

*Organization.—**The House Committee.—*

- (1) May adopt rules to govern the use of the Building, but such rules may be amended by the Board of Trustees of United Engineering Societies.
- (2) Has power to engage and discharge all employees for which it is responsible.
- (3) Allots space in the Building and audits all bills incurred for its needs.

**Engineering Societies Employment Service**

*Formed.*—December, 1918, as an activity of Engineering Council, funds for the maintenance being contributed by the four Founder Societies.



January 1, 1921, the Bureau was taken over by the Federated American Engineering Societies and was known as the Employment Service of that organization. Later, the Federation turned the Service back to the National Societies.

September 1, 1923, on the recommendation of a Joint Committee, the Boards of the Founder Societies made the Service co-operative, that is, those obtaining positions contributed part of the cost of operation, the Service being available only to members of co-operating organizations; placed the Service under the direction of the four Secretaries; and recommended that, under the co-operative plan, it be extended so as eventually to become National in scope.

In pursuance of this policy, branch offices have been established in Chicago, Ill., and San Francisco, Calif.

*Management.*—

National Board of Management: The Secretaries of the Founder Societies.

New York Office: Administered by the Secretaries of the Founder Societies, acting as a local Advisory Board.

Chicago Office: Administered by an Advisory Board composed of one representative from each of the Chicago Local Sections of the Founders, and the Secretary of the Western Society of Engineers, under the direction of the Secretaries of the four Founder Societies.

San Francisco Office: Administered by an Advisory Board, composed of a representative from each of the Local Sections of the Founder Societies, the California Section of the American Chemical Society, and the Engineers Club of San Francisco, under the direction of the Secretaries of the four Founder Societies.

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**Joint Conference Committee**

*Authorized.*—January 21, 1924, by the Boards of the Founder Societies, through the efforts of a joint committee appointed by the Board of Direction of the American Society of Civil Engineers, April 16, 1923.

*Purpose.*—To formulate a permanent workable method of joint co-operation on public affairs, matters of common interest, of assisting in cementing the friendship between American and foreign engineers, and to report its recommendations to the several Boards.

*Membership.*—The Joint Conference Committee is composed of the Presidents and Secretaries of the four Founder Societies.

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**John Fritz Medal**

The John Fritz Medal was established August 21, 1902, by the professional associates and friends of the late John Fritz, Hon. M. Am. Soc. C. E., of Bethlehem, Pa., to perpetuate the memory of his achievements in industrial progress.

The medal is awarded not more than once each year for notable scientific or industrial achievement, with no restrictions on account of sex or nationality.

The award is made by a Board of sixteen, four representatives from each Founder Society, one from each Society being appointed for 4-year terms.

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#### **Investigation of Engineering Education by the Society for the Promotion of Engineering Education**

This investigation was organized October 31, 1923, through a gift of \$108 000 by the Carnegie Corporation.

The Society for the Promotion of Engineering Education, composed principally of engineering teachers, undertook the project for the purpose of developing engineering education in accord with the changing conditions of modern times.

The first step—a three-year period of fact-finding—was financed by the Carnegie Corporation and carried out with the active participation of the National Engineering Societies, Engineering Colleges, U. S. Bureau of Education, National Industrial Conference Board, and others.

The second step—that of studying and assembling the material collected—is being carried on with the aid of funds from Engineering Foundation, the four Founder Societies, and other contributors.

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#### **American Engineering Standards Committee**

*Formed.*—January 17, 1917, at a meeting of a special committee appointed jointly by the four Founder Societies, and the American Society for Testing Materials. Later, on invitation, the U. S. Departments of War, Navy, and Commerce designated representatives to serve on the Committee. In August, 1919, the Constitution was broadened to permit other National bodies to be represented.

*Purpose.*—

- (a) To provide means by which various organizations engaged in formulating engineering standards may co-operate with one another, thus avoiding duplication and the production of conflicting standards.
- (b) To collect and make accessible, information on standardization work in the United States and foreign countries.
- (c) To receive and pass upon recommendations for standards submitted to it by other organizations in accordance with the Rules of Procedure, with the object of establishing American Engineering Standards; but not to formulate standards.
- (d) To promote knowledge of American Engineering Standards in foreign countries.
- (e) To act as the authoritative channel of co-operation in international engineering standardization.

*Membership.*—American Engineering Standards Committee, or "Main Committee", is composed of not more than three representatives from each of

the Founder Societies, the American Society for Testing Materials, the Government Departments of War, Navy, and Commerce, and other organizations of National scope as may be included.

The Member-Bodies of American Engineering Standards Committee at present are:

- American Electric Railway Association.
- American Institute of Architects.
- American Institute of Electrical Engineers.
- American Institute of Mining and Metallurgical Engineers.
- American Mining Congress.
- American Railway Association—Engineering Division.
- American Society of Civil Engineers.
- American Society of Mechanical Engineers.
- American Society for Testing Materials.
- Association of American Steel Manufacturers.
- Electrical Manufacturers Council:
  - Associated Manufacturers of Electrical Supplies.
  - Electrical Manufacturers Club.
  - Electric Power Club.
- Electric Light and Power Group:
  - Association of Edison Illuminating Companies.
  - National Electric Light Association.
- Fire Protection Group:
  - Associated Factory Mutual Fire Insurance Companies.
  - National Board of Fire Underwriters.
  - National Fire Protection Association.
  - Underwriters' Laboratories.
- Gas Group:
  - American Gas Association.
  - Compressed Gas Manufacturers' Association.
  - International Acetylene Association.
- The Panama Canal.
- Safety Group:
  - National Bureau of Casualty and Surety Underwriters.
  - National Safety Council.
  - Society of Automotive Engineers.
- Telephone Group:
  - Bell Telephone System.
  - United States Independent Telephone Association.
- U. S. Department of Agriculture.
- U. S. Department of Commerce.
- U. S. Department of the Interior.
- U. S. Department of Labor.
- U. S. Navy Department.
- U. S. War Department.

A Member-Body is an organization having representation on the Main Committee.

A Member is one of the individuals constituting the Main Committee. The term of members is three years.

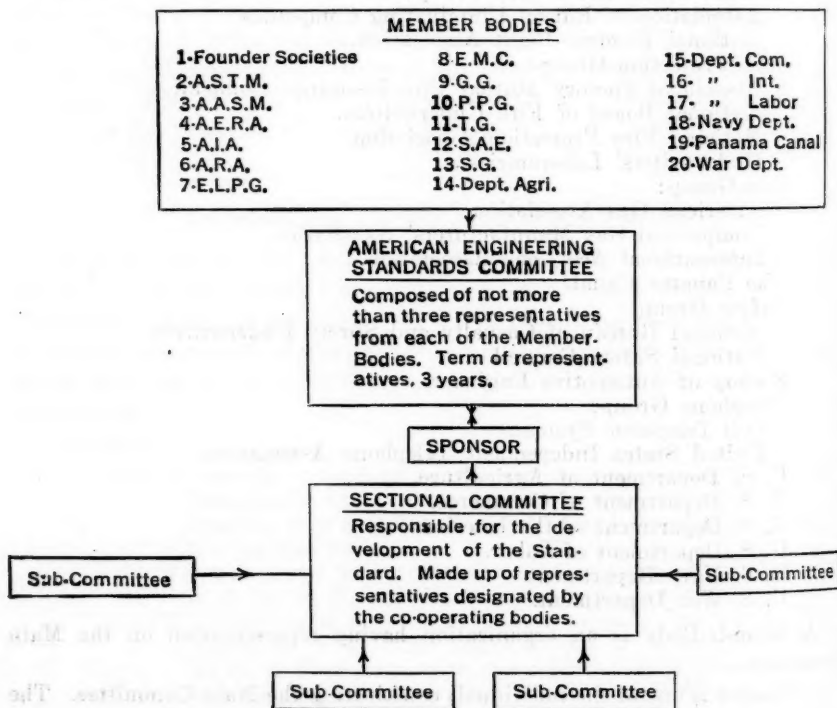
A Sustaining-Member is an organization, firm, or individual that subscribes directly to the support of the work.

A Co-Operating-Body is an organization co-operating in the work of the Committee, but not necessarily represented on the Committee.

*Activities.*—There are now 212 standardization projects in process or completed, sub-divided as follows:

Group.	Total.	Projects Approved.
Civil Engineering and Building Trades...	33	17
Mechanical .....	56	12
Electrical .....	30	8
Automotive .....	4	2
Transportation .....	9	6
Naval Architecture and Marine Engineer- ing — Shipbuilding .....	1	—
Ferrous metallurgy .....	9	7
Non-Ferrous metallurgy .....	14	10
Chemical .....	13	10
Textile .....	3	1
Mining .....	19	2
Wood .....	5	2
Pulp and paper .....	1	1
Miscellaneous .....	15	4

*Organization.*—



*Method of Work.*—

(A) For Proposed Standard:

- 1.—The proposal is submitted to American Engineering Standards Committee for consideration.



- 2.—Conference of interested bodies called by American Engineering Standards Committee considers proposal and scope of work.
- 3.—The sponsorship and scope of the project, as recommended by the Conference is acted upon by American Engineering Standards Committee.
- 4.—A Sectional Committee of representatives designated by the interested bodies is organized by the sponsor body.
- 5.—Make-up and personnel of Sectional Committee approved by American Engineering Standards Committee as to adequacy of representation.
- 6.—Standard drafted by Sectional Committee generally through sub-committee groups.
- 7.—Draft of Standard put forward for criticism.
- 8.—Proposed Standard, after reconsideration by Sectional Committee, submitted through sponsor to American Engineering Standards Committee.
- 9.—Standard approved by American Engineering Standards Committee as American, or Tentative American, Standard.
- 10.—Standard published by sponsor.

## (B) For Existing Standard:

- 1.—Existing Standard submitted to American Engineering Standards Committee for approval.
- 2.—Representative committee composed of representatives designated by all interested organizations, organized by American Engineering Standards Committee to consider approval of Standard.
- 3.—Recommendations on approval submitted to American Engineering Standards Committee by representative committee.
- 4-5-6.—Same as Sections 8-9-10 above.

### American Society of Civil Engineers, Joint Activities

#### Summary of Financial Conditions, 1926

*American Engineering Council:*

Administrative expense .....		\$42 000.68
Support .....	\$40 396.84	.....
	<hr/>	<hr/>
	\$40 396.84	\$42 000.68
Unfavorable balance.....	1 603.84	.....
	<hr/>	<hr/>
	\$42 000.68	\$42 000.68

*United Engineering Society:**Building Operation:*

Administrative expense .....		\$4 340.00
Operating income.....	\$80 163.94	.....
Amount credited to Founders.....		50 400.00
	<hr/>	<hr/>
	\$80 163.94	\$54 740.00
Favorable balance.....		25 423.94
	<hr/>	<hr/>
Unfavorable balance.....	\$80 163.94	\$80 163.94

*Engineering Foundation:*

Administrative expense.....		\$17 842.26
Endowment income.....	\$28 276.90	.....
	<hr/>	<hr/>
	\$28 276.90	\$17 842.26
Available for research .....		10 434.64
	<hr/>	<hr/>
	\$28 276.90	\$28 276.90

*Library:*

Administrative expense.....		\$41 035.63
Support .....	\$38 486.71	.....
	<hr/>	<hr/>
	\$38 486.71	\$41 035.63
Unfavorable balance.....	2 548.92	.....
	<hr/>	<hr/>
	\$41 035.63	\$41 035.63

*Employment Service:*

Administrative expense.....		\$9 847.28
Support .....	\$9 020.00	.....
	<hr/>	<hr/>
	\$9 020.00	\$9 847.28
Unfavorable balance.....	827.28	.....
	<hr/>	<hr/>
	\$9 847.28	\$9 847.28

*Promotion of Engineering Education:*

Administrative expense.....		\$36 500.00
Support .....	\$38 850.00	.....
	<hr/>	<hr/>
	\$38 850.00	\$36 500.00
Favorable balance.....		2 350.00
	<hr/>	<hr/>
	\$38 850.00	\$38 850.00

*American Engineering Standards Committee:*

Administrative expense.....		\$57 137.58
Support .....	\$60 229.21	.....
	<hr/>	<hr/>
	\$60 229.21	\$57 137.58
Favorable balance.....		3 091.63
	<hr/>	<hr/>
	\$60 229.21	\$60 229.21

# American Engineering Council

## Itemized Accounts, 1926

### Administrative and Operating

#### Revenue:

Royalties .....	\$514.84
Interest and miscellaneous .....	365.49
Miscellaneous collections .....	2 003.06

Total ..... \$2 883.39

### Administrative and Operating

#### Expenditures:

Salaries .....	\$20 908.75
Rent .....	1 906.84
Supplies, postage ....	1 583.09
Printing .....	1 105.06
Administrative Board .....	3 501.72
Council .....	3 763.73
Contingent .....	3 730.67
Publicity .....	3 300.00
Public works .....	2 364.46
Travel .....	1 436.09
Jurisdictional awards .....	280.66
Publications .....	160.11
Telegraph and Telephone .....	842.89

\$44 884.07

Less income ..... 2 883.39

Operating loss .. \$42 000.68

### Support:

#### Founders:

Mechanicals .....	\$17 717.00
Electricals .....	17 703.00

Total ..... \$35 420.00 \$35 420.00

#### Other Nationals:

Chemicals .....	\$722.00
Industrials .....	590.00
Agricultural .....	505.00

Total ..... \$1 817.00 1 817.00

State Societies (5) ..... 1 147.00

Local Societies (15) ..... 3 577.00

\$41 961.00\*

Less arrears not collected in 1926 ..... 1 167.52

\$40 793.48

Less to equal exact 1926 income ..... 1 743.64†

\$39 049.84

Contributions public works in 1926 ..... 1 347.00

\$40 396.84

Deficit for year ..... 1 603.84

\$42 000.68

\* Anticipated in 1927.

† Probably the expected increase in support during 1927 over 1926. This deduction is necessary here because details of 1926 figures are not available except the total of \$39 049.84 collected and the \$1 743.64 in arrears.

## United Engineering Society

### Itemized Building Operation, 1926

#### Operating Revenue:

Rentals .....	\$164 048.94
Miscellaneous .....	3 627.82
Telephone .....	12 065.25
	<hr/>
	\$179 742.01

Less cost ..... 100 447.66

Operating profit ..... \$79 294.35

#### Administrative Income:

Interest ..... \$869.59

#### Operating Expenditures:

Operating salaries .....	\$46 438.88
Supplies, insurance, etc.	7 792.70
Steam, water, gas, elec-	
tricity .....	18 296.28
Miscellaneous .....	3 998.08
Telephone .....	11 698.04
Maintenance and repairs	6 428.38
Alterations .....	510.80
Taxes .....	5 284.50
	<hr/>
	\$100 447.66

#### Administrative Expenditures:

Secretary, Treasurer,	
Staff Salaries .....	\$4 340.00
Refund to Founders...	50 400.00
	<hr/>
	\$54 740.00

Favorable balance ..... 25 423.94

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\$80 163.94

#### Disposition of Favorable Balance:

Annual payment to Depreciation and Renewal Fund.....	\$12 000.00
Additional " " " " " " .....	3 531.25
Added to real estate .....	6 840.98
Credit to balance on hand .....	3 051.71
	<hr/>
	\$25 423.94

### Itemized Engineering Foundation Accounts, 1926

#### Administrative Revenue:

Sale of publications....	\$1 146.83
Miscellaneous .....	150.95
	<hr/>

Income ..... \$1 297.78

#### Administrative Expense:

Salaries .....	\$11 014.50
Stationery, Printing,	
Postage .....	1 006.24
Publications .....	5 455.30
Publicity .....	1 500.00
Miscellaneous .....	164.00
	<hr/>

Less income ..... \$19 140.04

Administrative loss .... \$17 842.26



**Itemized Engineering Foundation Accounts, 1926 (Continued)****Support:**

Endowment income .....	\$28 276.90
Available for research .....	10 434.64*
	<hr/>
	\$17 842.26

**Distributed:\***

American Society of Civil Engineers.....	\$3 500.00
American Institute of Mining Engineers.....	2 000.00
American Institute of Electrical Engineers.....	2 917.00
Arch Dam .....	2 017.64*
	<hr/>
	\$10 434.64

**Itemized Library Accounts, 1926****Administrative and Operating  
Revenue:**

Book loans .....	\$291.81
Searches .....	10 974.11
Photostats .....	8 171.84

Total ..... \$19 437.76

**Administrative and Operating  
Expenditures:**

Maintenance salaries.....	\$32 803.74
Books, periodicals, binding .....	6 780.05
Supplies, insurance, etc. ....	2 575.96
Book loans .....	244.78
Search, photostats, sal- aries .....	14 445.91
Search, photostats, supplies .....	3 556.45
Bad accounts, etc.....	66.50

Total ..... \$60 473.39  
Less income ..... 19 437.76  

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Operating loss ..... \$41 035.63

**Support:**

Founder Societies .....	\$32 000.00
Associate Societies .....	1 210.00
Endowment income .....	5 276.71
	<hr/>
Total .....	\$38 486.71
Unfavorable balance .....	2 548.92
	<hr/>
	\$41 035.63

\* Raised to \$11 000 by withdrawal of \$8 982.36 from surplus.

### Engineering Societies Employment Service

#### Itemized Accounts, 1926, New York, Chicago, and San Francisco\*

##### Administrative and Operating Revenue:

Fees received .....	\$17 715.54
Bulletin subscriptions. 16 140.80	
Employers Bulletin subscriptions .....	1 295.00
Interest .....	131.10
Miscellaneous .....	376.00

Total ..... \$35 658.44

##### Administrative and Operating Expenditures:

Salaries .....	\$29 740.38
Rent .....	3 750.00
Stationery and printing .....	5 841.02
Postage .....	3 694.08
Telegraph and telephone .....	780.96
Miscellaneous and supplies .....	1 699.28

\$45 505.72

Less income ..... 35 658.44

Operating loss ..... \$9 847.28

##### Support:

Founder Societies .....	\$8 000.00
Associated Societies .....	1 020.00

\$9 020.00

\$9 020.00

Unfavorable balance ..... \$827.28

### Promotion of Engineering Education

#### Itemized Forecast for 1927

##### Administrative and Operating Revenue:

Sale of publications..	\$1 500.00
Grant for publications.	10 000.00

Total ..... \$11 500.00

##### Administrative and Operating Expenditures:

Salaries .....	\$23 000.00
Office expenses .....	2 000.00
Miscellaneous expenses	3 500.00
Publications .....	12 000.00
Summer School .....	7 500.00

\$48 000.00

Less income ..... 11 500.00

Operating loss ..... \$36 500.00

##### Support:

Founder Societies .....	\$4 850.00
Engineering Foundation	1 000.00
Associated Societies, etc.	33 000.00

\$38 850.00

Favorable balance ..... \$2 350.00

\$38 850.00

\* These figures are based on the six months, December to May, inclusive, but prorated as for twelve months.

## American Engineering Standards Committee

### Itemized Accounts, 1926

40.38  
50.00  
41.02  
94.08  
80.96  
99.28  
05.72  
58.44  
47.28

#### Administrative and Operating Revenue:

Sale of Standards....	\$843.26
Refunds .....	526.93
Interest .....	150.95

\$1 521.14

#### Administrative and Operating Expenditures:

Salaries .....	\$39 471.17
Rent .....	3 542.25
Mimeographing and printing .....	4 112.82
Postage .....	2 266.38
Purchase of Standards .....	860.33
Telephone .....	763.44
Supplies, equipment, translations .....	7 642.33

\$58 658.72

Less income ..... 1 521.14

Operating loss ..... \$57 137.58

#### Support:

20.00  
7.28

Founder Societies .....	\$6 000.00
Associated Societies ...	14 500.00
Sustaining membership.	35 729.21
Contributions .....	4 000.00

\$60 229.21

Favorable balance ..... \$3 091.63

\$60 229.21

### John Fritz Medal

The John Fritz Medal is a matter which is not of a business nature. There are expenses incidental to the award of the medal. These previously averaged \$500 per year. For the past two years the expense has been more nearly \$1 000.

The expense has been underwritten by the Founder Societies practically equally.

### Joint Conference Committee

The Joint Conference Committee has been the occasion of practically no expense to the Societies. No mileage is paid and each Society in turn has acted as host at an annual expense to each of perhaps \$10.

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ated

### Summary, 1926

#### Administrative Expenses:

##### United Engineering Society:

Building .....	\$4 340.00
Library .....	41 035.63
Engineering Foundation .....	17 842.26
Employment Service .....	9 847.28
American Engineering Standards Committee.....	57 137.58
Promotion of Engineering Education .....	36 500.00*
American Engineering Council .....	42 000.68

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\$208 703.43

#### Support Rendered by Founders:

Library .....	\$32 000.00
Employment Service .....	8 000.00
American Engineering Standards .....	6 000.00
Promotion of Engineering Education.....	4 850.00
John Fritz Medal .....	1 000.00*
American Engineering Council .....	35 420.00

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\$87 270.00      87 270.00

#### Support Rendered by Others:

Library Endowment .....	\$5 276.71
Library .....	1 210.00
Employment Service .....	1 020.00
American Engineering Standards .....	54 229.21
Promotion of Engineering Education.....	34 000.00*
American Engineering Council .....	4 976.76

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\$100 710.00      100 710.00

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\$187 980.00

#### Available from Operation Building:

Not distributed .....	\$29 763.94
Desirable for depreciation .....	12 000.00

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Available for joint activities .....

\$17 765.00      17 765.00

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\$205 745.00

#### Engineering Foundation:

Income available for research purposes..... \$28 276.00

### Present Contributions by Founder Societies

	A.S.C.E.	A.I.M.&M.E.	A.S.M.E.	A.I.E.E.	Total.
Library .....	\$8 000.00	\$8 000.00	\$8 000.00	\$8 000.00	\$32 000.00
Employment Service .....	1 815.00	420.00	4 130.00	1 635.00	8 000.00
Am. Eng. Standards.....	1 500.00	1 500.00	1 500.00	1 500.00	6 000.00
Prom. Eng. Education.....	1 600.00	250.00	1 200.00	1 800.00	4 850.00
John Fritz Medal.....	250.00	250.00	250.00	250.00	1 000.00*
Am. Engineering Council...	.....	.....	17 717.00*	17 703.00*	35 420.00*
Total .....	\$13 165.00	\$10 420.00	\$32 797.00	\$30 888.00	\$87 270.00
Contribution per member...	\$1.10	\$1.22	\$1.83	\$1.74	\$1.55

\* Approximate.

# Members of Assembly of American Engineering Council as of June 23, 1927

Name.	Society Represented.	Membership in Founder Societies.				Office on Council.
		A.S.M.E.	A.I.E.E.	A.S.C.E.	A.I.M.E.	
Dexter S. Kimball*	Am. Soc. Mech. Engrs.	X	..	..	..	Administrative Board
A. W. Berresford†	Am. Inst. Elec. Engrs.	X	X	..	..	"
O. H. Koch†	Tech. Club, Dallas, Tex.	..	..	X	..	"
I. E. Moulthrop	Am. Inst. Elec. Engrs.	X	X	..	..	"
Gardner S. Williamst	Detroit Eng. Soc.	X	..	X	..	"
H. E. Howet.	Am. Inst. Chem. Engrs.	..	..	..	..	"
C. C. Chesney	Am. Inst. Elec. Engrs.	..	X	..	..	"
J. H. Finney	Am. Inst. Elec. Engrs.	..	X	..	..	"
M. M. Fowler	Am. Inst. Elec. Engrs.	..	X	..	..	"
Farley Osgood	Am. Inst. Elec. Engrs.	..	X	..	..	"
C. F. Scott	Am. Inst. Elec. Engrs.	X	X	..	..	"
C. E. Skinner	Am. Inst. Elec. Engrs.	X	X	..	..	"
O. W. Sjogren	Am. Soc. Agri. Engrs.	..	..	..	..	"
W. L. Abbott	Am. Soc. Mech. Engrs.	X	X	..	..	"
John L. Harrington	Am. Soc. Mech. Engrs.	X	X	X	..	"
S. H. Libby	Am. Soc. Mech. Engrs.	X	..	..	..	"
Charles Penrose	Am. Soc. Mech. Engrs.	X	X	..	..	"
W. B. Powell	Am. Soc. Mech. Engrs.	X	..	..	..	"
D. Robert Yarnell	Am. Soc. Mech. Engrs.	X	..	..	..	"
W. F. Rittman	Soc. of Industrial Engrs.	X	..	..	..	"
Joseph Kemper	Mohawk Val. Engrs. Club	..	..	..	..	"

\* Pres., Administrative Board.

† Vice-Pres., Administrative Board.

‡ Treasurer, Administrative Board.





Members of Assembly of American Engineering Council  
as of June 23, 1927—(Continued.)

Name.	Society Represented.	Membership in Founder Societies.				Office on Council.
		A.S.M.E.	A.I.E.E.	A.S.C.E.	E.W.T.A.	
Dean E. Foster.....	Am. Soc. Mech. Engrs.....	x	..	..	..	Assembly
O. P. Hood.....	Am. Soc. Mech. Engrs.....	x	..	..	x	"
Wilson P. Hunt.....	Am. Soc. Mech. Engrs.....	x	..	..	..	"
Charles M. Schwab.....	Am. Soc. Mech. Engrs.....	x	..	..	x	"
E. N. Trump.....	Am. Soc. Mech. Engrs.....	x	..	..	..	"
T. L. Wilkinson.....	Am. Soc. Mech. Engrs.....	x	..	..	..	"
Earl L. Carter.....	Indiana Eng. Soc.....	..	x	..	..	"
John S. Dodds.....	Iowa Eng. Soc.....	..	..	x	..	"
F. P. Hamilton.....	Louisiana Eng. Soc.....	..	..	x	..	"
Edward Robinson.....	Vermont Soc. of Engrs.....	x	..	..	..	"
James R. Withrow.....	Engrs. Club of Columbus.....	..	..	..	..	"
Wayne A. Clark.....	Duluth Engrs. Club.....	..	..	x	..	"
Burritt A. Parks.....	Grand Rapids Eng. Soc.....	..	..	..	..	"
George E. Chamberlin.....	Engrs. Club of St. Louis.....	x	..	..	..	"
F. W. Epps.....	Topeka Engrs. Club.....	..	..	x	..	"
W. G. Hoyt.....	Washington (D. C.) Soc. of Engrs.....	..	..	x	..	"
John F. Sprenkel.....	Engrs. Soc. of York.....	..	..	..	..	"
Herbert Hoover.....	Past-President.....	x	..	x	x	"
M. E. Cooley.....	Past-President.....	x	..	x	..	"
James Hartness.....	Past-President.....	x	..	..	..	"

## Local Sections\*

**Duluth.**—August 15, 1927. Mr. J. F. Base gave an informal address, illustrated by numerous lantern slides, on "The Planning of Capital Cities". The slides depicted the general plans of numerous cities of Continental Europe.

**Los Angeles.**—August 10, 1927. After a dinner, Director H. W. Dennis reported on the various activities of the Society at the Annual Convention at Denver, Colo. A one-reel motion picture film, entitled "Building New York's Newest Subway", was presented by Mr. Merrill Butler who vividly portrayed the difficulties encountered in its construction. Mr. H. L. Masser, of the Los Angeles Gas and Electric Corporation, spoke on "Engineering Phases of Gas Production and Distribution". Discussion of the subject followed. Attendance 101.

**Sacramento.**—August 2, 1927. Mr. Albert Givan, General Manager and Chief Engineer of Sacramento Municipal Utility District, read a paper at the Joint Meeting of the Section and the Local Chapter of the American Association of Engineers, on "The Silver Creek Project of the District", a municipal water supply for the City of Sacramento. Attendance 33.

August 9, 1927. Mr. H. G. Palmer, Assistant District Manager of the Raymond Concrete Pile Company, of Los Angeles, spoke on "The Raymond Concrete Pile", after which the Section visited a job on which these piles are being used. Attendance 18.

August 16, 1927. Mr. H. R. Edwards spoke on "Mining for Tin in Portugal". Attendance 10.

August 23, 1927. The Rev. Berkeley B. Blake addressed the Section on "Astronomy". Attendance 16.

August 30, 1927. Mr. Boyd E. Oliver, formerly Assistant Engineer with East Bay Municipal Utility District, spoke on "The East Bay Aqueduct". Attendance 25.

**San Francisco.**—May 14, 1927: Members and guests made a tour of inspection of the East Bay Utility District. Attendance 105.

June 21, 1927. A dinner was held at which 80 members and guests were present. The Annual Prize offered by the Section to the Stanford University Student Chapter was awarded to Mr. John Wais, Jr. Mr. Wais was introduced and responded with a few words of appreciation. Mr. Oswald Spier, Jr., discussed the subject, "Penstock Design of the Buck's Creek Project", and Mr. Edward M. Knapik spoke on "Structural Features of the Ames-Herris-Neville Factory and Warehouse", illustrating his remarks with lantern slides. A one-reel motion picture entitled "Building New York's Newest Subway", was shown. The program of the evening was devoted chiefly to the consideration of sanitary problems. Mr. C. C. Kennedy opened the discussion. He was followed by Mr. C. G. Gillespie whose paper was entitled, "Remarks on the Disposal of Sewage and Industrial Wastes and Its Relation to Stream Pollution". Mr. Walter C. Roberts spoke on "What Other Cities Are Doing in Sewage Purification". Attendance 100.

\* For list of Local Section Officers, Rules, etc., see 1927 Year Book, p. 104.

## Engineering Societies Library

The services of the Engineering Societies Library are available to all members who wish searches, copies, translations, etc., or advice on technical literature. A collection of modern books is also available for loan to members in North America, at moderate rentals. Correspondence should be addressed to the Director, Engineering Societies Library, 29 West 39th Street, New York, N. Y., who will gladly give information concerning the charges for the various kinds of work. A more comprehensive statement in regard to this matter will be found on pages 126 and 127 of the Year Book for 1927.

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### Book Notices\*

(August 1 to August 31, 1927)

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**Airship Design.** By Charles P. Burgess. (Ronald Aeronautic Library.) N. Y., Ronald Press Co., 1927. 300 pp., illus., diagrams, tab., 9 x 6 in., cloth. \$9.00.

This book is a useful contribution to the meager literature on airship design, particularly the rigid type. The author confines himself to the theorems and methods of calculation peculiar to airship design. The work is intended as a textbook for students and a handbook for designers.

**American Aircraft Directory, 1927.** N. Y., Aviation Publishing Corporation, 1927. 176 pp., illus., 12 x 9 in. Paper, \$3.00; cloth, \$5.00.

A directory of National and local aeronautical associations, colleges that teach aeronautics, graduate aeronautical engineers, landing fields, aviators, supply companies, builders, and manufacturers of equipment, this book describes aviation activities, lists the personnel of various Government Departments, and gives the laws and rules of flying.

**Berechnen und Entwerfen von Turbinen- und Wasserkraft Anlagen.** By P. Holl. Rev. by E. Glunk. Fourth Edition. Munich u. Berlin, R. Oldenbourg, 1927. 187 pp., illus., 9 x 6 in., cloth. 10,50 r.m.

This little book describes concisely the various steps in the design of a hydraulic power plant with the necessary calculations, essential constants, and other data, the use of which is illustrated by several examples.

**Building Estimator's Reference Book; and Vest-Pocket Estimator.** By Frank R. Walker. Sixth Edition. Chic., Frank R. Walker Co., 1927. 1681 + 188 pp., illus., tab., 7 x 5 in., and 5 x 3 in., fabrikoid. \$10.00. 2 vol.

A compendium of itemized estimates and costs on everything entering into the construction of modern buildings, the amount of material and the number of labor hours required to complete any kind of work being given in detail. The "Vest Pocket Estimator" presents the same data in tabular, condensed form, and is of convenient pocket size.

**Conquest of the Air, an Historical Survey.** By C. L. M. Brown. Lond. & N. Y., Oxford University Press, 1927. 126 pp., illus., 7 x 5 in., cloth. \$1.00. (Gift of American Branch.)

An excellent brief review of man's long effort to achieve mechanical flight, which is not too technical for the general reader.

**Drafting for Engineers.** By Carl Lars Svensen. N. Y., D. Van Nostrand Co., 1927. 363 pp., illus., diagrams, tab., 9 x 6 in., cloth. \$2.75.

A comprehensive textbook which covers not only general methods and fundamental principles, but provides material for special study of architectural, structural, and electrical drafting.

\* The statements made in these notices are taken from the books themselves, and this Society is not responsible for them. Unless otherwise specified, the books in this list have been donated by publishers.

**Elements of Mechanics.** By Henry A. Erikson. N. Y., McGraw-Hill Book Co., 1927. 150 pp., tab., 8 x 6 in., cloth. \$1.75.

A college text of unusual brevity, designed as part of a general course in physics at the University of Minnesota.

**Foremanship and Supervision.** By Frank Cushman. N. Y., John Wiley & Sons, 1927. 238 pp., illus., 8 x 5 in., cloth. \$2.50.

The author illustrates in detail the use of conferences to train foremen as well as teachers and supervisors of vocational education.

**Introduction to the History of Science; Vol. 1: From Homer to Omar Khayyam.** By George Sarton. (Carnegie Institution of Washington. Publication No. 376.) Balt., Williams & Wilkins Co., 1927. 839 pp., 10 x 7 in., cloth. \$10.00.

By an original method, Dr. Sarton has compressed within reasonable limits of space an outline of the development of science from its faint beginnings to the end of the Twelfth Century.

**Isostasy.** By William Bowie. N. Y., E. P. Dutton & Co., 1927. 275 pp., illus., 9 x 6 in., cloth. \$5.00.

This work is a convenient and useful critical review of the voluminous literature on the subject. The aim is to present briefly the essential data leading to the proof of the isostatic condition of the earth's crust.

**Pressure Airships.** By Thomas L. Blakemore and W. Watters Pagon. (Ronald Aeronautic Library.) N. Y., Ronald Press Co., 1927. 311 pp., illus., diagrams, tab., 9 x 6 in., cloth. \$8.00.

The authors discuss the design and construction of non-rigid and semi-rigid types of airships in which the shape of the envelope is maintained by the pressure of the gas in it.

**Die Schwingung als Vortriebsfaktor in Natur und Technik.** By Hans Schramm. Berlin u. Leipzig, Walter de Gruyter & Co., 1927. 91 pp., illus., 9 x 6 in., paper. 4.—r.m.

This little book presents some results of the author's study of the methods by which birds fly and fish swim, with an account of his experiments in applying his conclusions to boat propulsion. His investigations are offered to call attention to the possibilities of oscillations for propulsion.

**Time and Motion Study and Formulas for Wage Incentives.** By Stewart M. Lowry, Harold B. Maynard, and G. J. Stegemerten. N. Y., McGraw-Hill Book Co., 1927. 377 pp., illus., charts, tab., 9 x 6 in., cloth. \$4.00.

On the basis of their practical experience in the time-study department of a large manufacturing concern, the authors present a fully developed time-study and formula system, which incorporates the principles that have stood the test of time, with newer developments. Their book is intended for use as a textbook in the training of students and also as a handbook for practical men and factory executives.

### Additions to the Reading Room

**Concrete Building Construction.** By Theodore Crane. Edited by the late Thomas Nolan. N. Y., John Wiley & Sons, Inc., 1927. 689 pp., 9 x 6 in., cloth. \$6.00.

The purpose of this book is to present in simple practical form the generally accepted principles of concrete design as applied to buildings, with recommended methods of office procedure and field construction in conformity with present-day standards.

**Landscape Architecture: A Series of Letters.** By Stephen Child, M. Am. Soc. C. E. Stanford Univ., Calif., Stanford Univ. Press, 1927. 279 pp., 10½ x 8 in., cloth. (Gift of the Author.)

This book discusses twelve typical problems of the profession and art of landscape architecture, in a series of letters which are the idealized correspondence of a landscape architect with his client.

Abbr

Am.

A. I.

A. R.

A. S.

Am.

Am.

Am.

Ann.

Ann.

Assoc.

Bost.

Can.

Corn.

Dock.

Eng.

Eng.

Eng.

Eng.

Engr.

Engr.

Engr.

Engr.

Engr.

Gas.

Gen.

Gesu.

Inst.

Inst.

Int.

Land.

Mech.

Mil.

Min.

Mun.

N. I.

N. Y.

Oest.

Pow.

Rev.

Ry.

Ry.

Sch.

Sci.

Soc.

Tec.

Ver.

We.

We.

Zel.

Z.



## Current Civil Engineering Literature

### Key to Abbreviated References to Publications Indexed\*

Abbreviated References.	Publication.	Place.
Am. C. Inst.....	American Concrete Institute, <i>Proceedings</i> (Y.)	Detroit
A. I. E. E.....	American Institute of Electrical Engineers <i>Journal</i> (M.)	New York
A. R. E. A.....	American Railway Engineering Association, <i>Proceedings</i> (Y.)	Chicago
A. S. T. M.....	American Society for Testing Materials, <i>Proceedings</i> (Y.)	Philadelphia
Am. Soc. C. E.....	American Society of Civil Engineers, <i>Proceedings</i> (M.)	New York
Am. Soc. Mun. Impvts.	American Society for Municipal Improvements, <i>Proceedings</i> (Y.)	New York
Am. W. W. Assoc.....	American Water Works Association, <i>Journal</i> (M.)	Baltimore
Am. Wood Pres. Assoc.	American Wood Preservers Association, <i>Proceedings</i> (Y.)	Chicago
Ann. P. et C.....	Annales des Ponts et Chaussées (Bi-M.)	Paris
Ann. T. P. Belg.....	Annales des Travaux Publics de Belgique (Bi-M.)	Brussels
Assoc. Ing. Gand.....	Annales de l'Association des Ingénieurs sortis des Ecoles Spéciales de Gand (Q.)	Ghent
Bost. Soc. C. E.....	Boston Society of Civil Engineers, <i>Journal</i> (M.)	Boston
Can. Engr.....	Canadian Engineer (W.)	Toronto
Cornell C. E.....	Cornell Civil Engineer (M.)	Ithaca
Dock & Harbour.....	Dock and Harbour Authority (M.)	London
Eng. ....	Engineering (W.)	London
Eng. & Contr.....	Engineering and Contracting (W.)	Chicago
Eng. Inst. Can.....	Engineering Institute of Canada, <i>Journal</i> (M.)	Montreal
Eng. N. R.....	Engineering News-Record (W.)	New York
Engrs. Soc. W. Pa.....	Engineers' Society of Western Pennsylvania, <i>Journal</i> (M.)	Pittsburgh
Engr. ....	Engineer (W.)	London
Engrs. & Eng.....	Engineers and Engineering, Engineers' Club of Philadelphia (M.)	Philadelphia
Gas und Wasser.....	Gas und Wasserfach (W.)	München
Gen. Civ.....	Le Génie Civil (W.)	Paris
Gesund. Ing.....	Gesundheits Ingenieur (W.)	Munich
Inst. C. E.....	Institution of Civil Engineers Minutes of Proceedings (Q.)	London
Inst. Mun. & Co. Engrs.	Institution of Municipal and County Engineers, <i>Journal</i> (W.)	London
Int. Ry. Cong. Assoc.	International Railway Congress Association, <i>Bulletin</i> (M.)	Brussels
Land. Arch.....	Landscape Architecture (M.)	Boston
Mech. Eng.....	Mechanical Engineering (M.) <i>Journal of the American Society of Mechanical Engineers</i>	New York
Mil. Engr.....	Military Engineer (Bi-M.)	Washington
Min. & Metal.....	Mining and Metallurgy (M.) <i>American Institute of Mining Engineers</i>	New York
Mun. & Co. Eng.....	Municipal and County Engineering (M.)	Indianapolis
N. E. W. W. Assoc.....	New England Water Works Association, <i>Journal</i> (Q.)	Boston
N. Y. R. R. Club.....	New York Railroad Club, <i>Proceedings</i> (M.)	Brooklyn
Oest. Ing. Arch. Ver.....	Oesterreichischer Ingenieur und Architekten Verein, <i>Zeitschrift</i> (F.)	Vienna
Power .....	Power (W.)	New York
Rev. Gen.....	Revue Générale des Chemins de Fer (M.)	Paris
Ry. Age .....	Railway Age (W.)	New York
Ry. Eng. & Main.....	Railway Engineering and Maintenance (M.)	Chicago
Schw. Bauz.....	Schweizerische Bauzeitung (W.)	Zurich
Scl. Am.....	Scientific American (M.)	New York
Soc. Ing. Civ. Fr.....	Société des Ingénieurs Civils de France, <i>Mémoires et Comptes Rendus</i> (Q.)	Paris
Tech. Gemein.....	Technisches Gemeindeblatt (F.)	Berlin
Ver. deu. Ing.....	Verein deutscher Ingenieure, <i>Zeitschrift</i> (W.)	Berlin
West. Constr. N.....	Western Construction News (F.)	San Francisco
West. Ry. Club.....	Western Railway Club, <i>Proceedings</i> (M.)	Chicago
West. Soc. Engrs.....	Western Society of Engineers, <i>Journal</i> (M.)	Chicago
Zeit. Bau.....	Zeitschrift für Bauwesen (Q.)	Berlin
Z. d. Bauver.....	Zentralblatt der Bauverwaltung (W.)	Berlin

\* Y = Yearly; Q = Quarterly; M = Monthly; F = Fortnightly; W = Weekly.

## B. Applied Mechanics

### a. Mechanics of Solids

#### 1. Mechanical Processes

Les Déformations Superficielles et la Distribution des Efforts dans les Eprouvetttes de Traction.\* (Superficial Deformations and the Distribution of Stresses in Tensile Test Pieces.) Ch. Fremont. Gen. Civ. July 2. '27.

### b. Hydraulics

#### 2. Physical Hydraulics

Initiation aux Progrès Récents de la Mécanique des Fluides, Leur Relation avec l'Electrodynamique.\* (Introduction to Recent Advances in the Mechanics of Fluids, their Relation to Electrodynamics.) G. Darrieus. Soc. Ing. Civ. Fr. Sept., '26.

Umrechnung des Druckabfalles in Rohrleitungen auf verschiedene Fördermittel.\* (Calculation of the Pressure Drop in Pipe Lines When Carrying Different Gases.) R. Biel. Gas und Wasser. June 18. '27.

Pitotrohr für Wassermessung bei hohem Druck.\* (Pitot Tube for Measuring Water at High Pressure.) Heinrich Homberger. Ver. deu. Ing. July 23. '27.

#### 3. Industrial Hydraulics

Hydro-Electric Generators.\* R. B. Williamson. West. Soc. Engrs. July. '27.

Conowingo Hydro-Electric Power Project.\* G. R. Strandberg. Eng. & Contr. Aug., '27.

Jordan River Hydro Power Development.\* Can. Engr. Aug. 2. '27.

The Walchensee Hydro-Electric Station. Eng. Serial beginning Aug. 5. '27.

Power Developments on Gatineau River.\* R. C. Rowe. Can. Engr. Aug. 16. '27.

Das Kraftwerk Eglisau der Nordostschweizerischen Kraftwerke.\* (The Eglisau Power Plant of the Nordostschweizerischen Kraftwerke.) Schw. Bauz. Serial beginning July 16. '27.

#### 4. Dams

Florence Lake Multiple Arch Dam.\* West. Constr. N. July 25. '27.

Combined Railway Bridge and Dam Built at Outlet of Grand Lake, Newfoundland.\* A. B. McEwen. Eng. N. R. July 28. '27.

Design of Multiple-Arched Dams.\* B. F. Jakobsen. Eng. & Contr. Aug., '27.

The Tests on the Experimental Arch Dam on Stevenson Creek, California.\* Fred A. Noetall. Eng. Aug. 12. '27.

Bristol Dam Designed for Later Height Increase.\* W. D. Henderson. Eng. N. R. Aug. 18. '27.

## C. Materials of Construction and General Processes

### a. Lime, Cement, Mortar, Concrete, Brick, Bitumin, Timber, etc.

The Logging and Lumbering Interests of the Pacific Northwest. A Symposium. Discussion:

Roland H. Stock, Hugo Winkenwerder and C. S. Chapman. Am. Soc. C. E. Aug., '27.

Design of Sand and Gravel Plants. Frank M. Welch. (Paper read before Nat'l Sand & Gravel Assoc.) Can. Engr. Aug. 23. '27.

### b. Metals

La Nituration des Aciers et son Utilisation Industrielle.\* (The Nituration of Steels and Its Industrial Utilization.) Léon Guillet. Gen. Civ. Serial beginning July 9. '27.

### c. Preservation and Use of Materials, Painting, Waterproofing

Calcium Carbide as an Agent for Removing Sulphur and Phosphorous from Iron and Steel.\* William James Farrell. West. Soc. Engrs. July. '27.

### f. Rock Excavation, Mining, Rock Removal

Vibrations Caused by Quarry Blasting and Their Effect on Structures.\* E. H. Rockwell. (From paper read before Nat'l Crushed Stone Assoc.) Eng. & Contr. July. '27.

Le Lavage et la Carbonisation de la Houille aux Mines de la Loire et de Roche-la-Molière.\* (The Washing and Carbonization of Coal at the Mines of Loire and Roche-la-Molière.) Ch. Berthelot. Soc. Ing. Civ. Fr. Sept., '26.

Les Installations Mécaniques du Jour de la Compagnie de Roche-la-Molière et Firminy et de la Société Anonyme des Mines de la Loire, Manufacture Française d'Armes et de Cycles de Saint-Etienne.\* (Mechanical Installations above Ground for the Compagnie de Roche-la-Molière et Firminy and for the Société Anonyme des Mines de la Loire, Manufacture Française d'Armes et de Cycles de Saint-Etienne.) P.-E. Leroux. Soc. Ing. Civ. Fr. Sept., '26.

### g. Execution of Works, Specifications

Unique Mixing Plant on Mid-West Project. Eng. & Contr. Aug., '27.

Quantity Survey System and the Owner. Oscar Euphrat. (Paper read before Am. Inst. Quantity Surveyors.) Can. Engr. Aug. 2. '27.

#### 2. Of Concrete

Concrete Used in Rebuilding Reims Cathedral.\* Eng. N. R. Aug. 25. '27.

#### 4. Of Metal

Construction Methods Used on Cleveland Terminal.\* Frank W. Skinner. Eng. & Contr. July. '27.

Welded Structural Steelwork.\* W. H. Thorpe. Eng. Aug. 12. '27.

#### 5. Of Reinforced Concrete

Factors Affecting Use and Cost of Reinforced-Concrete Buildings.\* W. W. Hay. Eng. N. R. Aug. 4. '27.

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L'Eglise en Béton Armé de Montmagny (Seine-et-Oise.) (Reinforced Concrete Church in Montmagny (Seine-et-Oise).) Gen. Civ. July 16, '27.

#### x. Miscellaneous

Constructing Asphalt Tennis Courts. W. E. Rosengarten. (From pamph. issued by Asphalt Assoc.) Can. Engr. Aug. 16, '27.

#### h. Foundations, Bridge Piers and Abutments

Foundations of Power Stations and Substations. E. M. Van Norden. (From *Proceedings* Bklyn. Engrs. Club) July, '27.

Wirtschaftlicher Tiefbau.\* (Economic Underground Construction.) H. Ehlgötz. Tech. Gemein. Serial beginning July 5, '27.

#### k. Tunnels and Tunneling-Shield

London, England, Subway Extended by Tunneling.\* (From *Electric Railway Journal*) Eng. & Contr. July, '27.

Progress of the Cascade Tunnel, Great Northern Ry.\* Eng. N. R. Aug. 11, '27.

### D. Highways

#### c. Construction

Construction of Gravel Roads in Nevada. Howard M. Loy. (Paper read before Assoc. of West Highway Officials.) Mun. & Co. Eng. July, '27.

Stone Basis for Roads. Rodman Wiley. (Paper read before Louisiana Eng. Soc.) Mun. & Co. Eng. July, '27.

Improved Roads of Low Cost. C. N. Conner. (Paper read before Highway Research Board.) Mun. & Co. Eng. July, '27.

Temperatures Developed in High-Alumina Concrete.\* T. H. Cutler. Eng. N. R. July, '27.

The Reconstruction of Newport-Cardiff Trunk Road.\* S. A. Bennett. Inst. Mun. & Co. Engrs. July 19, '27.

Concrete Pavement on the Carqueuz Bridge.\* Louis Jennings. West Contr. N. July 25, '27.

Asphalt Paving Mixture Practice. A. W. Dow. (Paper read before Am. Soc. Mun. Impvts.) Can. Engr. July 26, '27.

Bituminous Penetration Pavement. E. C. Welden. (Paper read before Am. Assoc. State Highway Officials.) Eng. & Contr. (R. & S.) Aug., '27.

The Highway Traffic Problem. W. A. Van Duzer. (Paper read before Purdue Univ.) Eng. & Contr. (R. & S.) Aug., '27.

Modern Crushed Stone and Gravel Surfacing. J. W. Hoover, Esq. Am. Soc. C. E. Aug., '27.

When May Roads be Opened to Traffic. H. F. Clemmer. Can. Engr. Aug. 2, '27.

Zion-Mount Carmel Road, Zion National Park, Southern Utah.\* West. Constr. N. Aug. 10, '27.

Quality of Design and Control of Concrete. Joseph A. Kitts. Eng. N. R. Aug. 11, '27.

#### d. Maintenance

Highway Maintenance in Ohio. George E. Carr. (From *Highway Topics*.) Mun. & Co. Eng. July, '27.

Management of Road Maintenance Equipment.\* W. A. Van Duzer. Eng. N. R. Aug. 11, '27.

#### e. Street Cleaning, Dust Prevention, Snow Removal

Determining Snow Removal Requirements.\* V. R. Burton. Eng. N. R. Aug. 18, '27.

Snow Removal Methods and Equipment.\* V. R. Burton. Eng. N. R. Aug. 25, '27.

#### h. Vehicles, Automobiles, Traffic

The Highway Grade Crossing Problem. Robert H. Ford. West. Soc. Engrs. July, '27.

Relation of Road Type to Tire Wear.\* O. L. Waller and H. E. Phelps. Am. Soc. C. E. Aug., '27.

Automobile Hazard in Cities and Its Reduction.\* Discussion: William T. Lyle, M. O. Eldridge, C. W. Stark, L. G. Holleran, S. Johannesson, W. Graham Cole, Harold M. Lewis, J. K. Finch, G. G. Kelcey, Raymond A. O'Hara, John A. Miller, Jr., and T. Kennard Thomson. Am. Soc. C. E. Aug., '27.

Super Highway Plan of Detroit Metropolitan Area. Sidney D. Waldon. (Paper read before Univ. of Michigan.) Eng. & Contr. (R. & S.) Aug., '27.

#### x. Miscellaneous

Recent Developments in Highway Research.\* E. F. Kelley. (Paper read before Am. Road Bldrs. Assoc.) Eng. & Contr. (R. & S.) Aug., '27.

### E. Bridges, Viaducts, and Arches

#### a. Timber Bridges and Viaducts

Röm.-katholische St. Antoniuskirche in Basel.\* (St. Antonius Roman Catholic Church in Basel.) Schw. Bauz. July 2, '27.

#### b. Iron and Steel Bridges and Viaducts

The Carqueuz Strait Bridge.\* D. B. Steinman and C. F. Goodrich. Engrs. & Eng. July, '27.

Montreal South Shore Cantilever Bridge Under Construction.\* Eng. N. R. July 28, '27.

Welded Material Strengthens Old Railway Truss Bridge.\* W. R. Roof. Eng. N. R. Aug. 4, '27.

- Erecting the Buffalo-Fort Erie Bridge.\* Thomas Earle. Can. Engr. Aug. 9, '27.  
 The Mokau Bridge, Taranaki, New Zealand.\* Engr. Aug. 12, '27.  
 Railway Bridge Over the Elbe at Hamerten.\* Eng. Serial beginning Aug. 19, '27.  
 Construction of Bridge at Chute-a-Caron.\* D. C. Tennant. Can. Engr. Aug. 23, '27.

#### d. Concrete and Reinforced Concrete Bridges and Viaducts

- Long Concrete Bowstring Bridge Erected in France.\* W. L. Scott. Eng. N. R. Aug. 18, '27.  
 Concrete Cantilever Bridge With Flexible Expansion Bearings.\* J. F. Seiler. Eng. N. R. Aug. 25, '27.

#### f. Suspension Bridges. Transfer Bridges

- The Eye-Bar Cable Suspension Bridge at Florianopolis, Brazil.\* Discussion: J. A. L. Waddell, Spencer Miller, Lloyd G. Frost, C. G. Emil Larsson and Clyde T. Morris. Am. Soc. C. E. Aug., '27.  
 Design of 3,500-Ft. Suspension Bridge Across Hudson River.\* Eng. N. R. Aug. 11, '27.  
 Nouvelles Recherches sur le Calcul des Ponts Suspendus et de Leurs Poutres de Rigidité.\* (New Researches on the Calculation of Suspension Bridges and Their Stiffening Girders.) G. Pigeaud. Gen. Civ. Serial beginning July 2, '27.

### F. Inland Waters

#### b. Canals (General Articles)

- The Panama Canal. John F. Stevens. Am. Soc. C. E. Aug., '27.  
 The Lake Washington Ship Canal, Washington.\* W. J. Barden and A. W. Sargent. Am. Soc. C. E. Aug., '27.  
 Der dreissigjährige Kaiser-Wilhelm-Kanal. Seine Vorgeschichte, Entwicklung und Bedeutung.\* (Thirty years of the Kaiser-Wilhelm Canal. Its Previous History, Development and Importance.) K. Wulle. Zeit. Bau. Pt. 4 (Ing. 4-6), '27.

#### c. Regulation of Waterways—Volume of Discharge, Freshets, Floods, Soundings

- Probability of Flood Flows.\* Discussion: H. Alden Foster, W. P. Creager, A. Streiff, and Sigurd Eliassen. Am. Soc. C. E. Aug., '27.  
 River Control in the Palo Verde Valley.\* Spencer E. Webb. Eng. N. R. Aug. 11, '27.  
 Meanderings of Alluvial Rivers Governed by a Fixed Law.\* P. Claxton. Eng. N. R. Aug. 18, '27.  
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 Der Mississippi und seine Hochwasser.\* (The Mississippi and Its Floods.) R. Seifert. Ver. deu. Ing. July 23, '27.  
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#### d. Diverting Dams, Locks, Lifts, Elevators, Inclined Planes

- Why Beartraps Fill with Gravel.\* C. M. Wellons. (From *Central Division News*.) Eng. & Contr. Aug., '27.  
 Die Betriebseinrichtungen für den Bau der Schleusen bei Anderten.\* (The Operating Arrangements for the Construction of the Locks at Anderten.) Schonk and Maaske. Z. d. Bauver. Serial beginning July 6, '27.

### G. Maritime Works

#### a. Behavior of Movement of the Ocean

- Tides and Their Engineering Aspects.\* G. T. Rude. Am. Soc. C. E. Aug., '27.

#### c. Vessels and Maritime Navigation, Lighthouses, Buoys, Various Signals

- Le XIVe Congrès International de Navigation (Le Caire, 6-21 décembre, 1926).\* (The XIVth International Navigation Congress (Cairo, December 6-21, 1926).) A. de Rouville and others. Gen. Civ. Serial beginning July 2, '27.  
 Le Paquebot "Ile-de-France" de la Compagnie Générale Transatlantique.\* (The Steamship "Isle de France" of the Compagnie Générale Transatlantique.) Olivier Quéant. Gen. Civ. Serial beginning July 2, '27.  
 Wirtschaftlicher Schiffsantrieb.\* (Economic Ship Propulsion.) G. Kempf. Ver. deu. Ing. July 23, '27.

#### d. Roads and Outer Harbors. Dikes and Jetties. Breakwaters

- Breakwater Extension at Port Arthur.\* F. Y. Harcourt. Can. Eng. July 26, '27.

#### h. Wharves, Mooring Buoys, Harbor Equipment

- The New Gladstone Docks, Liverpool.\* Dock & Harbour Aug., '27.

#### i. Harbors (General Articles)

- The Twin Harbours of Port Arthur and Fort William.\* F. Y. Harcourt. Dock & Harbour Aug., '27.  
 The Work of the Port of Seattle, Washington.\* George F. Cotterill. Am. Soc. C. E. Aug., '27.  
 The Western Ports of the North Atlantic.\* Brysson Cunningham. Eng. Serial beginning Aug. 5, '27.

**H. Railroads. Street and Interurban Railways. Automobiles. Aeronautics****a. Railroads****1. General Articles**

Open-Cut Subway, New York City, Built Under Unusual Conditions.\* George Paaswell. Eng. N. R. Aug., '27.

Physical Betterments Improve Railway Efficiency.\* Ralph Budd. Ry. Age Aug. 6, '27.

New Texas Railroad for Rock Island Lines.\* Eng. N. R. Aug. 18, '27.

**4. Track**

Fortschritte im Bau von Gleiswiegevorrichtungen.\* (Advances in the Construction of Track Scales.) Max Raudnitz. Ver. deu. Ing. July 16, '27.

**5. Signals and Safety Apparatus**

Santa Fe Train Control Aids Traffic.\* C. K. Thomas. Ry. Age Aug. 6, '27.

Le Bloc Automatique sur Lignes Electrifiées de la Compagnie des Chemins de Fer du Midi.\* (The Automatic Block on Electrified Lines of the Compagnie des Chemins de Fer du Midi.) M. G. Gilles. Rev. Gen. July, '27.

**6. Rolling Stock**

The Design of Coupling Rods for Electric Locomotives.\* Eng. July 22, '27.

Full Gear Versus Limited Cut-Off.\* H. J. Vincent. (Abstract of paper read before Central Ry. Club.) Ry. Age July 30, '27.

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Eight-Wheel Switch Engine with Large Boiler Capacity.\* Ry. Age Aug. 6, '27.

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**7. Use of Electricity**

Contact System Mounted on Springs.\* F. R. Thompson. Ry. Age Aug. 13, '27.

Description et Essais d'une Nouvelle Locomotive Diesel Electrique en Service en Tunisie.\* (Description and Tests of a New Diesel-Electric Locomotive in Service in Tunis.) Louis Poullain. Rev. Gen. July, '27.

**8. Stations, Terminals, Engine Houses, Shops**

Illinois Central Builds Large Shops at Paducah.\* Ry. Age Aug. 6, '27.

Construction Methods Used on Cleveland Terminal.\* Eng. & Contr. July, '27.

P. R. R. Builds Country's Largest Express Terminal.\* Ry. Age Aug. 13, '27.

**9. Technical and Commercial Use**

Urban and Interurban Buses.\* Discussion: Robert P. Woods, Fred G. Buffe, B. H. Piepmeyer, C. E. Smith, Winters Haydock, John W. Reid, and Lucius S. Storrs. Am. Soc. C. E. Aug., '27.

**d. Street Railways, Elevated Railways, Subways****1. General Articles**

Subsurface Structures in Subway Construction.\* Martin I. Kohn. (From Municipal Engineers Journal.) Eng. & Contr. Aug., '27.

Rapid-Transit Railway at Sydney, Australia.\* Eng. N. R. Aug. 25, '27.

**f. Aeronautics****1. General Articles**

The New Aerodynamic Laboratory of the University of Toronto.\* J. H. Parkin. Eng. Inst. Can. Aug., '27.

**4. Aerodromes and Landing Fields**

An Aeroplane Station in Mid-Atlantic.\* William Hovgaard. Eng. Aug. 19, '27.

**I. Municipal Water-Works. Agricultural Engineering. Irrigation****a. General Articles**

Military and Emergency Water Supplies.\* George C. Danforth. N. E. W. W. Assoc. June, '27.

A Program for Improving the Water Service in Chicago.\* Am. W. W. Assoc. Aug., '27.

A New Jersey Water Case. Louis L. Tribus. Am. W. W. Assoc. Aug., '27.

Water Supply for Army Railways in France. Discussion: William G. Atwood. Am. Soc. C. E. Aug., '27.

Neuerungen in Wasserwerksbetrieb. (Improvements in Water Works Operation.) Vollmar. (Paper read before the Verein Sächsisch-Thüringischer Gas- und Wasserfachmänner.) Gas und Wasser. Serial beginning July 16, '27.

**b. Hydrology, Water Resources**

The Origin and Distribution of Underground Waters. J. W. Gregory. (Paper read before British W. W. Assoc.) Engr. July 22, '27.

Grundwasserbildung und Quellenspelung nach den neuesten Forschungsergebnissen.\* (Formation of Ground Water and Supply of Springs according to the latest Results of Research.) Chr. Mezger. Gesund. Ing. July 2, '27.

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**c. Dams and Reservoirs**

Pondage Important Factor in Spillway Design.\* Melvin D. Casler. Eng. N. R. July 28, '27.

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- Notes on Arched Gravity Dams.\* B. F. Jakobsen. Am. Soc. C. E. Aug., '27.  
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#### d. Analysis and Purification of Water

- Story of the Efforts Which Led to the Purification of the Water Supply of Pittsburgh, and to the Elimination of Typhoid Fever From That Cause.\* James Otis Handy. Engrs. Soc. W. Pa. Apr., '27.  
 The Purification of Water for Boiler Feed Purposes.\* Thos. R. Duggan. Eng. Inst. Can. Aug., '27.  
 New Ideas in Filter Plant Construction. John L. Porter. (Southwest W. W. Assoc.) Eng. & Contr. (W. W.) Aug., '27.  
 Iodization of Public Water Supplies for Prevention of Endemic Goiter.\* Robert Olesen. Am. W. W. Assoc. Aug., '27.  
 Zeolite Water Treatment in a Large Central Heating Plant.\* Alfred H. White and Others. Am. W. W. Assoc. Aug., '27.  
 La Nouvelle Station de Filtration d'Eau Potable de Sandfields (Angleterre). (The New Sandfields Water Filtration Plant (England).) Gen. Civ. July 23, '27.  
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#### e. Distribution of Water

- Soil Corrosion and Its Effect Upon Piping as Shown by the Tests of the United States Bureau of Standards.\* John D. Capron. N. E. W. W. Assoc. June, '27.  
 Effect of Cement-Lined Pipes Upon the Quality of the Water Supplied. Burton G. Philbrick. N. E. W. W. Assoc. June, '27.  
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 Modern Pumping Station Design and Its Probable Future Development.\* Arthur L. Mullergren. Am. W. W. Assoc. Aug., '27.  
 State Reclamation in Washington. Discussion: James Rhea Luper, W. G. Swendsen, J. C. Stevens, O. L. Waller and Joseph Jacobs. Am. Soc. C. E. Aug., '27.  
 Some Phases of Irrigation Financing. Discussion: M. C. Hinderlider, C. E. Grunsky, Joseph Jacobs, and H. F. Dunham. Am. Soc. C. E. Aug., '27.  
 Proposed United States Government Specification for Centrifugally-Cast Iron Pipe.\* H. A. Stacy and I. J. Fairchild. Am. W. W. Assoc. Aug., '27.  
 Movement of Mokolumne Pipe Line During Construction.\* Eng. N. R. Aug. 4, '27.  
 Old Masonry Conduit Reinforced to Support Heavy Sand Fill. Joseph Goodman. Eng. N. R. Aug. 25, '27.  
 Technische Vorschriften für Bau und Betrieb von Grundstücksbewässerungsanlagen. (Technical Specifications for the Construction and Operation of Water Supply Installations for Irrigation.) Gesund. Ing. July 16, '27.

### J. Sewerage. Sewage and Refuse Disposal

#### a. Sewers and Drains

- Design and Construction of Gooseneck Sewer.\* J. F. Brown. Eng. N. R. July, '27.  
 Main Sewer Reconstruction in Newport (Mon).\* P. W. Ladmore Inst. Mun. & Co. Engrs. July 19, '27.  
 Replacing Wood Stave Outfall Sewer with Concrete at El Paso.\* Robert P. Anderson. Eng. N. R. Aug. 4, '27.  
 Reinforced Concrete for Sewer and Conduit Works.\* Engr. Serial beginning Aug. 5, '27.  
 Designs for Joints in Large Pipe on the Ocean Bottom.\* Eng. N. R. Aug. 25, '27.  
 Vereinfachte Berechnung von Kanalisationsrohren.\* (Simplified Calculation of Sewer Pipes.) Fr. Huppertz. Gesund. Ing. July 9, '27.

#### b. Sewage Disposal, Purification

- Recent Trend in Sewage Disposal Developed in Design for Fostoria, Ohio.\* J. F. Laboon. Engrs. Soc. W. Pa. Apr., '27.  
 Recent Progress in Sewage Disposal and Stream Pollution Problems. Isador W. Mendlesohn. (Paper read before Conference on Sewage Treatment, Ames, Iowa.) Mun. & Co. Eng. July, '27.  
 The Sewage Disposal Problem of Los Angeles, California.\* Willis T. Knowlton. Am. Soc. C. E. Aug., '27.  
 Stream Pollution in the Pacific Northwest. William F. Allison. Am. Soc. C. E. Aug., '27.  
 The Work of the Los Angeles County (California) Sanitation Districts.\* Albert K. Warren. Am. Soc. C. E. Aug., '27.  
 Comparative Advantages of Powers for Pumping.\* Arthur E. Collins. Inst. Mun. & Co. Engrs. Aug. 9, '27.  
 Sewage Disposal in 1927. J. D. Watson. Inst. Mun. & Co. Engrs. Aug. 9, '27.  
 Sewage Disposal Problem at Decatur. William D. Hatfield. (Paper read before Ill. Soc. Engrs.) Can. Engr. Aug. 9, '27.  
 Schenectady Sewage Chlorination Studies, 1926-27. Morris M. Cohn. Eng. N. R. Aug. 11, '27.



## K. Heat Engines

### b. Steam Turbines

Berechnung der Eigenfrequenzen von Dampfturbinenschaufeln.\* (Calculation of the Specific Frequencies of Steam Turbine Blades.) E. Jaquet. Schw. Bauz. July 2, '27.  
Festigkeit halbkreisförmiger Platten und Dampfturbinen-Leiträder.\* (Strength of Semi-Circular Plates and Steam Turbine Guide Wheels.) Huggenberger. Ver. deu. Ing. July 2, '27.

## L. Electricity

### b. Distribution and Transmission of Electricity

#### 1. Power Plants

The Villalba Hydro-Electric Station: Spain.\* Eng. Serial beginning July 22, '27.  
Civil Engineering Features of the Hell Gate Station. Discussion: George A. Orrok and A. Streiff. Am. Soc. C. E. Aug., '27.

#### 2. Long-Distance Transmission of Energy

A South Wales Power Transmission Scheme.\* Engr. July 29, '27.  
Zur Entwicklungsgeschichte der Hohlseile.\* (On the History of the Development of the Hollow Cable.) August Fuchs. Ver. deu. Ing. July 16, '27.

### d. Mechanical Uses of Electricity

#### 2. Servomotors, Hoists, Elevators, Handling Machinery

Kompoundierte Asynchronmaschinen für den elektromotorischen Antrieb und die Netzkupplung.\* (Compound Asynchronous Machines for Electromotive Drive and the Net Connection.) W. Kummer. Schw. Bauz. July 23, '27.

#### 3. Welding

Welded Structural Steelwork.\* W. H. Thorpe. Eng. Aug. 12, '27.

## M. Architecture

### a. Educational, Government and Scientific Buildings

Internationaler Wettbewerb für das Völkerbund-Gebäude in Genf.\* (International Competition for the League of Nations Building in Geneva.) Schw. Bauz. July 9, '27.

### i. Fire and Earthquake Protection

Introduction to the Study of Earthquakes. Robins Fleming. Can. Engr. Aug. 16, '27.

## O. Administration. Legislation. Economics. Statistics

### b. Economic Questions of a General Character, Valuations, Etc.

Public Relations. Daniel T. Pierce. Am. W. W. Assoc. Aug., '27.

### d. Administrative and Financial Management of Means of Communication

#### 5. Railroads and Street Railways

The Relation of Highway Transportation to the Railway. Discussion: John V. Hanna, E. A. Hadley and F. G. Jonah. Am. Soc. C. E. Aug., '27.  
Balancing Factors in the Use and Obligations Covering Ownership of Freight-Train Cars.\* L. K. Silcox. Mech. Eng. Aug., '27.

## S. City Planning

Some Problems of Seaside Health Resorts. Leslie Roseveare. Inst. Mun. & Co. Engrs. July 19, '27.

Slum Areas Under the Housing Acts.\* F. Marsden. Inst. Mun. & Co. Engrs. July 19, '27.

Development. G. L. Penler. Inst. Mun. & Co. Engrs. July 19, '27.

Preparing the Groundwork for a City: The Regrading of Seattle, Washington.\* Arthur H. Dimock. Am. Soc. C. E. Aug., '27.

Re-Arrangement of a Business District: Changes in Recent Years in Pittsburgh, Pennsylvania.\* Nathan Schein. Am. Soc. C. E. Aug., '27.

The Planning of the Industrial City of Longview, Washington.\* S. Herbert Hare, Esq. Am. Soc. C. E. Aug., '27.

Provincial Town Planning Organization. Tracy D. Lemay. (Paper read before Town Planning Inst. of Can.) Can. Engr. Aug. 9, '27.

Berliner Städtebaufragen.\* (Berlin City Building Questions.) Gustav Langen. Z. d. Bauver. June 29, '27.

Die Bebauung des Blauringes und Blaubeurer Torres der Bundesfestung Ulm.\* (Building up the Blauring and Blaubeur Gate of the Ulm State Fortress.) Chr. Kläiber. Z. d. Bauver. June 29, '27.

## T. Oil and Oil Engineering

Electricity in the Drilling of Oil Wells.\* L. J. Murphy. A. I. E. E. Aug., '27.

## Employment Service

The Engineering Societies Employment Service is under the joint management of the National Societies of Civil, Mining, Mechanical, and Electrical Engineers. A Chicago office is maintained in co-operation with the Western Society of Engineers, and a San Francisco office, in co-operation with the Engineers' Club of San Francisco and the California Section of the American Chemical Society. The Service is available only to the several memberships and is maintained by contributions from the Societies and their individual members who are directly benefited.

*Offices.*—Eastern Office, 31 West 39th Street, New York, N. Y., Walter V. Brown, Manager; Chicago Office, 53 West Jackson Boulevard, Room 1736, Chicago, Ill., A. Krauser, Manager; and San Francisco Office, 57 Post Street, Room 715, San Francisco, Calif., Newton D. Cook, Manager.

*Men Available.*—Under this heading, brief announcements will be published without charge. These announcements will not be repeated, except on request received after an interval of one month. Names and records will remain in the active files of the Service for a period of three months, and are renewable on request. Notices for *Proceedings* should be addressed to Employment Service, 31 West 39th Street, New York, N. Y., and should be received prior to the first of the month.

*Opportunities.*—A Bulletin of engineering positions available is published weekly and may be obtained by members of the Societies concerned at a subscription rate of \$3 per quarter, or \$10 per annum, payable in advance. Positions which are not filled promptly as a result of publication in the Bulletin, may be announced herein.

*Voluntary Contributions.*—Members obtaining positions through the medium of this Service are invited to co-operate with the Societies in the financing of the work by nominal contributions made within thirty days after placement, on the basis of 1½% of yearly salary; temporary positions (of one month or less), 3% of total salary received. The income contributed by the members, together with the finances appropriated by the four Societies named, will be sufficient, it is hoped, not only to maintain but to increase and extend the Service.

*Replies to Announcements.*—Replies to announcements published herein, or in the Bulletin, should be addressed to the key number indicated in each case, with a two-cent stamp attached for re-forwarding, and forwarded to the Employment Service at the address given. Replies received by the Service after the positions to which they refer have been filled, will not be forwarded.

### MEN AVAILABLE

**CONSTRUCTION SUPERINTENDENT, Assoc.**  
M. Am. Soc. C. E.; age 33; married; good executive with experience on large factory buildings of concrete and steel, housing projects, street paving, and sewers, desires connection with contractor or architect. Available on one month's notice. Minimum salary \$400 per month. A-17.

**RESIDENT ENGINEER, graduate civil engineer, Assoc. M. Am. Soc. C. E.;** age 37; available after September 15; completing power development dam, penstock, power house, transmission line, etc. Experienced field engineer on subways, plant, railroad and paving, production engineering in a foundry, and superintendent for a contractor. Will go anywhere B-4052.

**STRUCTURAL ENGINEER**, Assoc. M. Am. Soc. C. E.; age 33; married; American citizen; graduate civil engineer; structural steel and power house designer with extensive experience in bridge design, also railroad work. Total experience, eight years. Location, New York or vicinity; Chicago or vicinity. B-6318.

**GRADUATE CIVIL ENGINEER**, Assoc. M. Am. Soc. C. E., Lafayette College 1915; age 33; single; with twelve years' experience in the design, construction, and maintenance of buildings, is available for position with industrial organization as maintenance or plant engineer. Position should be permanent. B-9058.

**NEW YORK AGENCY**, on a commission basis, for building products, desired by civil engineer, Assoc. M. Am. Soc. C. E., who has had long experience with prominent engineering, architectural, and manufacturing firms. Well known to architects and builders and experienced in promoting and first introduction of new products. B-9276.

**GRADUATE CIVIL ENGINEER**, Assoc. M. Am. Soc. C. E.; age 37; married. Thirteen years' varied experience; sewers, roads, streets, and last four years on municipal work, including water-works, sewer systems, and paving. Executive position desired with consulting engineer or contractor. Location anywhere. C-611.

**FIELD ENGINEER**, Assoc. M. Am. Soc. C. E.; age 45; single. Twelve years' experience in Latin-America on railroad location and construction, pipe line, transmission line, land surveying, plant construction; also, engineer in charge of mining operations. Some design and mechanical testing experience. C-2245.

**YOUNG GRADUATE CIVIL ENGINEER**, desires work in South America or elsewhere. Majored in structures in college. Experienced detailer. Married; age 23; in good health. At present employed in structural detailing. C-2789.

**RESIDENT ENGINEER AND CONSTRUCTION SUPERINTENDENT**, Assoc. M. Am. Soc. C. E.; technical graduate; age 46; married. Fifteen years' experience on construction of power plants, dams, railroads, and highways in the United States and Spanish countries; three years, operating public utilities. Location preferred, Southern States or foreign country. C-3204.

**CIVIL ENGINEER, SALES ENGINEER OR OFFICE MANAGER**, Assoc. M. Am. Soc. C. E.; age 50, married; M. I. T. graduate; eight to ten years, drafting, estimating, and designing of structural steel; fifteen years in foreign countries doing engineering work, selling and working on sales promotion. Has working knowledge of both Spanish and Portuguese. C-3362.

**CIVIL ENGINEER-DESIGNER**, Assoc. M. Am. Soc. C. E.; age 39; married. Four years, structural engineer-designer, Oakland Estuary Subway. Previously, associate engineer, U. S. Navy, water-front structures. Eighteen years' experience includes bridge, municipal, highway, railroad engineering, dams, hydraulic structures. Capable assuming responsible charge and conducting original investigations. C-3390-1438.

**CIVIL ENGINEER**, M. Am. Soc. C. E.; age 44. Twenty-two years' experience on railway, highway, irrigation, and bridge work. Competent to make investigations and reports or superintend large construction. Recently returned from two and one-half years' work in South America. Working knowledge of Spanish. C-3398.

**CIVIL ENGINEER**, Assoc. M. Am. Soc. C. E.; age 37. Eight years, municipal, street railway, and land development work; two years, base-line surveys for ship canal; eleven years, hydro-electric power developments in charge of topographic surveys, construction of power houses, dam, substations, transmission lines, etc. Location preferred, Florida or Southern States, but open to any good position. C-3430.

**EXPORT MANAGER**, Assoc. M. Am. Soc. C. E.; graduate textile and mechanical engineer; post graduate, civil engineering; age 34; American; experienced purchasing officer. Nine years' export experience engineering material, seven years as manager of large foreign territory for well-known exporters of engineering material. Capable handling credits, advertising, and sales. Location immaterial. C-3448.

**RUSSIAN GRADUATE CIVIL ENGINEER**, Assoc. M. Am. Soc. C. E.; American citizen. Twenty years' experience in civil and commercial engineering. Has been in British India. Desires connection with concern interested in trade or concession with U. S. S. R. (Russia). Will go to Russia or Europe. C-3497.

## Membership

(From August 3 to September 6, 1927)

### Additions

		Date of Membership.
ANTHONY, Walter Burton Edward. Field Engr., Water-Works Dept. of Detroit, 1134 West Forrest Ave., Detroit, Mich.....	Assoc. M.	July 11, 1927
ARNOLD, Carl Eugene. Constr. Engr. for J. E. Rockhold, 133 East Palm St., Bellflower, Calif.....	Assoc. M.	July 11, 1927
BAGLEY, Harry Howe. Detailer, Turner Constr. Co., New York, N. Y. (Res., 482 Burton Ave., Hasbrouck Heights, N. J.)....	Jun.	Mar. 14, 1927
BAXTER, John Crichton. Vice-Pres., A. Guthrie & Co., Inc., 1209 Builders Exchange Bldg., St. Paul, Minn.....	M.	July 11, 1927
BELL, Andrew McAlpine. Res. Engr., State Highway Dept., Box 275, Ravenna, Ky.....	Jun. Assoc. M.	April 20, 1925 April 18, 1927
BELL, Frank Frederick. Vice-Pres., Uvalde Paving Co. (Res., 6263 Richmond Ave.), Dallas, Tex.....	Assoc. M.	Aug. 29, 1927
BOWEN, John Edmund. Rodman and Draftsman, Reading Co., Holland, Pa.....	Jun.	July 11, 1927
BRESSLER, Henry William. Engr., R. Waddington & Sons, Inc., Hoboken, N. J. (Res., 94 Spring St., Ossining, N. Y.)....	Jun.	April 18, 1927
BROOKE, Allan Farquhar. Prin. Asst., W. N. Brown, 1800 E St., N. W., Room 701, Washington, D. C.....	Assoc. M.	Aug. 29, 1927
BROWN, Dalton Munroe. Field Engr., Thomas Crimmins Contr. Co. (Res., 161 West 87th St.), New York, N. Y.....	Jun.	April 18, 1927
BULLOCK, Virgil William. Structural Designer, H. G. Balcom (Res., 605 West 175th St., Apartment 44), New York, N. Y.....	Jun. Assoc. M.	Oct. 12, 1925 June 6, 1927
CAULFIELD, Henry John. Res. Engr. in Chg., State Highway Dept., 602 North 12th, Waco, Tex.....	Jun. Assoc. M.	Mar. 12, 1923 Aug. 29, 1927
CHAPIN, Henry Morrison. Constr. Engr., Bureau of Eng., 611 Finance Bldg., Philadelphia, Pa.....	M.	Aug. 29, 1927
CLARK, David. Prof., Civ. Eng., Trinity Coll., Dublin, Ireland... }	Assoc. M.	Sept. 12, 1921
CLASSEN, Ashley Green. Sales Engr., The Western Metal Mfg. Co., Box 2246, Lubbock, Tex.....	M.	July 12, 1927
COLLINS, Robert Wetmore. Vice-Pres., Southwestern Constr. Co., 428 West Bldg., Houston, Tex.....	Jun. Assoc. M.	July 11, 1927 Aug. 28, 1922 Aug. 29, 1927
CONE, George Hubert. 706 Builders Exchange Bldg., San Antonio, Tex.....	Jun. Assoc. M.	Oct. 2, 1922 Aug. 29, 1927
DOYLE, Walter Henry. Chf. of Party with L. C. L. Smith, 444 Jackson Ave., Long Island City (Res., 2955 Grand Concourse, New York), N. Y.....	Jun.	Mar. 14, 1927
FALES, John Chester. Asst. Hydr. Engr., State Div. of Water Rights (Res., 2624 Q St.), Sacramento, Calif.....	Assoc. M.	June 6, 1927
FIELD, Francis Eugene. 58 Grove St., Asheville, N. C.....	Jun.	July 11, 1927
FULTON, Cecil Clement, Jr. Vice-Pres., Gilbert C. White Co., Durham, N. C.....	M.	Aug. 29, 1927
GATYAS, Joseph Andrew John. Junior Engr., N. Y. C. R. R., 534 Poplar St., Roselle, N. J.....	Jun.	July 11, 1927
GLYNN, Hugh Francis, Jr. 987 Summit Ave., New York, N. Y..	Jun.	July 11, 1927
GONGWER, James Minnick. Civ. Engr. with Thos. W. Marshall (Res., 853 Van Buren St., N. W.), Washington, D. C.....	Jun.	July 11, 1927
GOSA, Robert Earl. Vice-Pres., W. Horace Williams Co. (Res., 833 Howard Ave.), New Orleans, La.....	Assoc. M.	Aug. 29, 1927
GRAY, Ralph. Asst. Engr., North Jersey Dist. Water Supply Comm., Wanaque, N. J.....	Assoc. M.	Mar. 14, 1927
GRIMM, Sergel Nicolas. Draftsman, Bureau of Eng., 617 Walnut Ave., Syracuse, N. Y.....	Assoc. M.	Aug. 29, 1927
HARVEY, Walter Sidney. City Engr. (Res., 129 Harmon St.), Warren, Ohio.....	M.	Nov. 15, 1926
HJORT, Sigge Ingolf Esbjorn. With R. M. Frandsen (Res., 1600 Fell St.), San Francisco, Calif.....	Assoc. M.	July 11, 1927
HORNER, Arthur Stewart. Estimator, The Dutton & Kendall Co. (Res., 2324 Grape St.), Denver, Colo.....	Jun. Assoc. M.	Mar. 15, 1926 July 11, 1927
HOUK, Howard Herman. State Bridge Engr., Alabama Highway Comm. (Res., 1209 South Court St.), Montgomery, Ala....	M.	Aug. 29, 1927
HOWLAND, Arthur Ervin. Chf. Engr., Long Island State Park Comm. (Res., 67 Argyle Ave.), Babylon, N. Y.....	M.	Aug. 29, 1927
HUNNICUTT, James Madison. Contr. Engr., Virginia Bridge & Iron Co. (Res., 118 Richelleu Ave., South), Roanoke, Va....	Jun.	Aug. 29, 1927
HURD, Harold Waller. Box 582, Albuquerque, N. Mex.....	Jun.	Mar. 14, 1927
JENNINGS, Robert Bond. Asst. Engr., Sewer Dept., City Engr.'s Office (Res., 2375 Neil Ave.), Columbus, Ohio.....	Jun.	July 11, 1927
KAYSSER, Robert. 436 Park Ave., Syracuse, N. Y.....	Assoc. M.	June 6, 1927
KIENER, Tyler Bainbridge. Asst. Engr., S. B. Williamson, Box 423, University, Va.....	Assoc. M.	Aug. 29, 1927

## MEMBERSHIP—(Continued)

Date of  
Membership.

ROENITZER, Lester Henry. Insp., State Highway Comm., 531 West State St., Centerville, Iowa.....	Jun.	July 11, 1927
LALONDE, Jean Paul. With Eug. Quay, Inc. (Res., 656 de l'Epee Ave.), Montreal, Que., Canada.....	Jun.	June 6, 1927
LAND, Richard Irving. Engr., Marc Eidlitz & Son (Res., 145 Audubon Ave.), New York, N. Y.....	Jun.	June 6, 1927
LARKIN, William James, Jr. Designing Engr., U. S. Gypsum Co. (Res., 1711 Granville Ave.), Chicago, Ill.....	M.	Aug. 29, 1927
LICHTER, Jacob. Pres., Southern Fireproofing Co., 101 Marietta St., Room 406, Atlanta, Ga.....	Jun.	Dec. 15, 1924
LUM, Clarence Kaawaapahulu. Levelman, Honolulu Sewer and Water Comm. (Res., 2945 Oahu Ave.), Honolulu, Hawaii...	Assoc. M.	Aug. 29, 1927
MACDONALD, John Stephen. Chf. Engr., Patrick McGovern, Inc., New York (Res., 55 Twenty-Seventh St., Jackson Heights), N. Y.....	Jun.	Mar. 14, 1927
MACFARLANE, Edward. 56 Westervelt Ave., New Brighton, N. Y.	Assoc. M.	Mar. 14, 1927
McLEAN, Joseph Raymond. Div. Engr., State Highway Comm., Madison, Wis.....	Assoc. M.	April 18, 1927
MARVIN, Ralph Erwin. Structural Engr., Meyer & Holler, Inc., 315 Wright Callender Bldg., Los Angeles, Calif.....	M.	July 11, 1927
MURRELL, John William. Asst. Res. Engr. of Sewers, State Hydr. Engr.'s Dept., Box 409, Adelaide, South Australia.....	M.	Mar. 14, 1927
NEWCOMER, Albert Waldo. Draftsman, Middle Rio Grande Conservancy Dist. (Res., 218 Vassar Ave.), Albuquerque, N. Mex.	Jun.	April 18, 1927
NIELSEN, Jens Egede. Designing Engr., Frank A. Randall, 160 North La Salle St. (Res., 2970 Sheridan Rd.), Chicago, Ill....	Jun.	July 11, 1927
NORD, Charles Louis. Bridge Engr., State Highway Dept., 2 Hartley St., Hamden, New Haven, Conn.....	Assoc. M.	Aug. 29, 1927
PARKER, George Mason. Asst. Engr., U. S. Engr. Office (Res., 1346 Magnolia Ave.), Norfolk, Va.....	Assoc. M.	Jan. 17, 1921
PARSONS, Eliot Barber. Municipal and Cons. Engr., 419 North Washington St., Watertown, Wis.....	M.	April 18, 1927
PETERSEN, Ludwig. Bridge Designer, Ill. Cent. R. R. (Res., 3506 Greenview Ave.), Chicago, Ill.....	Jun.	Feb. 25, 1924
PITZMAN, Frederick. Engr., Pitzman's Co. of Surveyors and Engrs., 615 Chestnut St., St. Louis, Mo.....	Assoc. M.	Aug. 29, 1927
PLATT, Howard Charles. 344 Van Nostrand Ave., Jersey City, N. J.....	Assoc. M.	Aug. 29, 1927
POST, William Louis. 220 West Hopocan Ave., Barberton, Ohio..	Jun.	Apr. 18, 1927
POTGIETER, Fred M. Hydr. Engr., Utilities Power & Light Corporation, 460 Winnetka Ave., Winnetka, Ill.....	Assoc. M.	Mar. 14, 1927
REEDER, Arthur Lowrie. Engr., Bureau of Water, 25 North 11th St., Reading, Pa.....	Assoc. M.	Mar. 14, 1927
REYNOLDS, James Robert. Junior Engr., N. Y. C. R. R., 466 Lexington Ave., Room 966, New York (Res., 10756 One Hundred and Twenty-First St., Richmond Hill), N. Y.....	M.	Aug. 29, 1927
ROBERTS, Elliott Burgess. Junior Hydrographic and Geodetic Engr., U. S. Coast and Geodetic Survey, Washington, D. C....	Jun.	July 11, 1927
SHERZER, Allen Firman. Associate Prof., Mech. Eng., Univ. of Michigan; Cons. Hydr. Mech. Engr., 1213 Ferdon Rd., Ann Arbor, Mich.....	Jun.	June 19, 1922
SNYDER, Morris Kay. Prof., San. Eng., State Coll. of Washington (Res., 305 Columbia Ave.), Pullman, Wash.....	Assoc. M.	June 6, 1927
SOBIERALSKI, Alfred Modesto. Care, U. S. Coast and Geodetic Survey, Washington, D. C.....	Assoc. M.	June 6, 1927
SPEER, Carl, Jr. Junior San. Engr., Div. of Water Safety Control (Res., 7516 Colfax Ave.), Chicago, Ill.....	M.	Mar. 14, 1927
SPENCER, Warren Russell. Associate Prof., Civ. Eng., Univ. of Arkansas (Res., 318 West Lafayette St.), Fayetteville, Ark..	Jun.	Mar. 14, 1927
STEINBERG, Samuel Sidney. Head of Dept. and Prof., Civ. Eng., Univ. of Maryland, College Park, Md.....	Assoc. M.	June 6, 1927
STROLLO, James. Engr., Brent Good Bldg., Long Beach, N. J....	Assoc. M.	Aug. 29, 1927
TURK, Milton. Archt.-Engr., 941 Rogers Pl., New York, N. Y....	Jun.	Mar. 12, 1923
URIBE, Arturo Arella. Director-Gen. de Ferrocarriles, Ministerio de Obras Publicas, Apartado 26, Bogota, Colombia.....	Assoc. M.	Aug. 29, 1927
VALDEZ, Rafael Enrique. Dist. Engr., Dept. of Public Works, Box 525, Santo Domingo, Dominican Republic.....	Assoc. M.	June 6, 1927
VANDERBEEK, Horace Anderson. Asst. Engr., Am. Bridge Co., 30 Church St., New York, N. Y. (Res., 149 North Doughty Ave., Somerville, N. J.).....	Jun.	June 6, 1927
WAGGENER, Robert Garnett. Asst. Engr., Tex. & Pac. R. R., 1005 T. & P. Bldg., Dallas, Tex.....	M.	Aug. 29, 1927
WATSON, Richard Charles Sanchez. (Howorth & Watson), Box 364, Hattiesburg, Miss.....	Assoc. M.	Jan. 17, 1921
	M.	Mar. 14, 1927
	Assoc. M.	Mar. 14, 1927



## MEMBERSHIP—(Continued)

		Date of Membership.
WEAVER, Frank Elmer. Cons. Engr., Federal Asphalt Paving Co. (Res., 218 North 8th St.), Hamilton, Ohio.....	M.	Aug. 29, 1927
WEBB, Albert Arthur. Junior Civ. Engr., City of Los Angeles (Res., 1523 Tonawanda St.), Los Angeles, Calif.....	Assoc. M.	July 11, 1927
WHITNEY, Howard Erwin. Civ. Engr., The Arundel Corporation, Conowingo, Md.....	Jun.	Mar. 14, 1927
WIPFLER, Michael William. City Engr. (Res., 374 West Gray St.), Elmira, N. Y.....	M.	Aug. 29, 1927
WILLIAMS, Daniel McGregor. With William M. Piatt, Durham, N. C.....	Assoc. M.	June 1, 1926
WRIGHT, Earl Seaward. 115 East 30th St., New York, N. Y....	M.	July 12, 1927
WYNNE-EDWARDS, Robert Meredydd. Asst. Engr., The Sydney E. Jenkins Co., B. C., Ltd., 605 Metropolitan Bldg., Vancouver, B. C., Canada.....	Assoc. M.	Aug. 29, 1927
		Assoc. M. June 6, 1927

## Deaths

- ADAMS, Henry Sewall. Elected Member, June 6, 1906; died August 21, 1927.
- BLAND, John Carlisle. Elected Junior, May 12, 1875; Member, June 4, 1879; died July 16, 1927.
- BROWN, Nathaniel Adelbert. Elected Member, February 25, 1924; died May 21, 1927.
- BURKE, Thomas Redmond. Elected Associate Member, August 30, 1926; died August 27, 1927.
- DAVIS, Benjamin Herman. Elected Associate Member, November 30, 1909; Member, October 15, 1923; died August 17, 1927.
- EMERSON, George Dana. Elected Associate Member, June 3, 1908; Member, April 14, 1919; died August 23, 1927.
- HAYES, Edward. Elected Member, June 5, 1901; died April 17, 1927.
- HUMPHREYS, Alexander Crombie. Elected Member, March 6, 1895; died August 14, 1927.
- SMITH, Godfrey Lewis. Elected Member, July 6, 1920; died July 2, 1927.
- TRIPP, Oscar Holmes. Elected Associate Member, October 7, 1896; Member, September 5, 1905; died August 24, 1927.

## Total Membership of the Society, September 6, 1927

Members .....	5 348
Associate Members.....	5 675
Corporate Members.....	11 023
Honorary Members.....	14
Juniors .....	1 324
Affiliates .....	145
Fellows .....	8
Total.....	12 514